Ongoing Monitoring Report – 2024

Bandiana Military Area

Department of Defence

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Appendix D Stantec OMP Sampling Event Report – April 2024 (Stantec 2024b)



PFAS OMP Factual Report

Biannual Sampling Event April 2024

Bandiana Military Area

DEF19008



Prepared for
Department of Defence

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Our report is based on information made available by the client. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Cardno is both complete and accurate. Whilst, to the best of our knowledge, the information contained in this report is accurate at the date of issue, changes may occur to the site conditions, the site context or the applicable planning framework. This report should not be used after any such changes without consulting the provider of the report or a suitably qualified person.

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List of Abbreviations and Units

Chemical Names

DOC	Dissolved Organic Carbon
DO	Dissolved Oxygen
PFAS	Per- and Poly-fluoroalkyl Substances
PFHxS	Perfluorohexanesulfonate
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonate
TDS	Total Dissolved Solids (salinity of water)
TSS	Total Suspended Solids

Technical Terms

AFFF	Aqueous Film-Forming Foam
AHD	Australian Height Datum
ANZECC	Australian and New Zealand Environment and Conservation Council
ANZG	Australia and New Zealand Guidelines
AS	Australian Standard
ASC	Assessment of Site Contamination
AST	Above-ground Storage Tank
BGL	Below Ground Level
CoC	Chain of Custody
CSM	Conceptual Site Model
DQI	Data Quality Indicator
DQO	Data Quality Objective
DSI	Detailed Site Investigation
EC	Electrical Conductivity
EPA	Environment Protection Authority
ESA	Environmental Site Assessment
HEPA	Heads of Environmental Protection Authority
HHERA	Human Health and Ecological Risk Assessment
HIL	Health Investigation Level
HSL	Health Screening Level
IP	Interface Probe
LOR	Limit of Reporting
N/A	Not Applicable
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	National Environmental Protection Measure
NHMRC	National Health and Medical Research Council
QA	Quality Assurance
QC	Quality Control

RPD	Relative Percentage Difference
SAQP	Sampling and Analysis Quality Plan
SWL	Standing Water Level

Units

ha	Hectares
mBGL	Metres Below Ground Level
mbTOC	Metres below Top of Casing
mg/kg	Milligram per Kilogram (approximately equivalent to ppm)
mg/L	Milligram per Litre
mV	Millivolt
ORP	Oxidation-Reduction Potential
ppm	Parts per Million
µg/L	Micrograms per Litre
µS/cm	Micro Siemens per Centimetre (Electrical Conductivity - Water)

Site Specific

OMP	Ongoing Monitoring Plan
DCMM	Defence Contamination Management Manual
ESdat	Environmental data management software
BMA	Bandiana Military Area
MA	Management Area

1 Introduction

1.1 Background

Cardno was engaged by the Department of Defence ("Defence" or "the Client") to carry out the Per- and Poly-fluoroalkyl Substances (PFAS) Ongoing Monitoring Plan (OMP) at Bandiana Military Area ("the Site"). The Bandiana Military Area (BMA) is comprised of three individual properties identified as North Bandiana (Gaza Ridge Barracks), South Bandiana (Gaza Ridge Barracks) and East Bandiana (Wadsworth Barracks).

The OMP was carried out in accordance with the scope and limitations presented in Cardno's Sampling and Analysis Quality Plan (SAQP):

> Cardno, 24 March 2024 Reference: DEF19008_OMP002, '*PFAS Ongoing Monitoring Plan Sampling and Analysis Quality Plan (SAQP) Bandiana Military Area'*, Rev 6.

For the purposes of this report:

> The "On-Site Monitoring Area" (the 'Site') is defined as BMA and is comprised of three individual properties identified as North Bandiana (Gaza Ridge Barracks), South Bandiana (Gaza Ridge Barracks) and East Bandiana (Wadsworth Barracks).

> The "Off-Site Monitoring Area" is defined as comprising Jack in the Box Creek to the north west of South Bandiana to its confluence with Wodonga Creek, an unnamed creek to the east of North Bandiana to its confluence with the Kiewa River, and the Kiewa River and western Kiewa River floodplain from Middle Creek in the south to north of the unnamed creek.

> The "Management Area" (MA) is defined as comprising the On-Site Monitoring Area and the Off-Site Monitoring Area.

The location of the Site (BMA), MA, the On-Site Monitoring Area and the Off-Site Monitoring Area are displayed in Figure 1 of Appendix A.

1.2 Purpose & Objectives

The objective of the OMP is to assess the changes in the nature and extent of PFAS within the environment, specifically where there is an identified potentially elevated risk to a receptor or a potential future risk to a receptor associated with Defence's historical use of Aqueous Film-Forming Foam (AFFF).

The purpose of this PFAS OMP factual report is to provide an up-to-date status of the condition of the Site as it is currently understood in relation to the most recent sampling event.

The objectives of the report are:

> To provide a succinct summary of the April 2024 sampling event and provision of analytical results with supporting tables and figures.

> To provide confirmation of the current understanding of risk.

> To provide supporting data for the assessment of management actions, where relevant.

1.3 Relevant Guidelines

This assessment has been undertaken in general accordance with applicable industry standards for a site investigation for the purpose, objectives and scope identified in this report. These standards are set out in:

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

> Australian Standard, 2005, AS 4482.1-2005 *Guide to the investigation and sampling of sites with potentially contaminated soils, Part 1 - Non-volatile and semi-volatile compounds*[1].

[1] AS 4482.1-2005 is currently 'Withdrawn', but the assessment will consider it still to be suitable as a state of knowledge document until superseded.

> Department of Defence, Department of Energy, 2018, *Quality System Manual Schedule B15*.

> Heads of Environment Protection Authority Australia and New Zealand (HEPA), 2020, *PFAS National Environmental Management Plan (NEMP),* Version 2.0, January 2020.

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

> National Health and Medical Research Council (NHMRC), 2019, *Guidance on Per and Polyfluoroalkyl Substances (PFAS) in Recreational Water*.

> Standards Australia, 1998, AS/NZ 5667:1998 *Water Quality – Sampling, Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples*.

> U.S. Environmental Protection Agency (EPA), 2006, '*Guidance for the Data Quality Objectives Process (EPA QA/G-4)*'.

> USEPA, 2002, '*Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8)'.*

2 Scope of Work

Cardno carried out the following tasks in order to satisfy the purpose and objectives of this assessment.

2.1 Review / Revision of the SAQP

Cardno undertook a review of the SAQP (Rev6 Cardno, 2024) prior to commencement of sampling and completed updates to the SAQP to be in line with the *PFAS Ongoing Monitoring Program Sampling, Analysis and Quality Plan Guidance* (Cardno, 2023) document. The SAQP (Cardno, 2024) will be reviewed and revised (as required) prior to the next monitoring event scheduled for October 2024.

2.2 Groundwater Monitoring

Sampling of groundwater monitoring wells was performed in accordance with the SAQP, applying methods set out in Section 3.1 of this report. The groundwater monitoring wells scheduled for sampling as part of the OMP April 2024 biannual sampling event are presented in Table 2-1, and are shown in Figure 3, Appendix A.

Table 2-1 Groundwater Monitoring Locations

Catchment	Sampling Frequency	Location (On-Site/ Off-Site)	Number of Monitoring Locations	Monitoring Well / Bore ID
Jack in the Box Creek	Biannual	On-Site	3	MW304, MW307 and MW312.
		Off-Site	2	MW360 and MW361.
Kiewa River	Annual	On-Site	1	MW056
	Biannual	On-Site	24	MW009, MW012, MW016, MW018, MW020, MW029, MW034, MW035, MW042, MW043, MW046_I, MW046_D, MW052, MW342, MW345, MW346, MW350_S, MW350_D, MW351, MW352, MW353, MW354, MW403 and MW404.
		Off-Site	3	MW356, MW357, OTH019.

1. MW056 was not sampled as scheduled in the E5 annual sampling event. As per the SAQP (Cardno, 2024), it was to be sampled in the following E6 event and again in the E7 (normal frequency) to provide an additional data point, as it has not been sampled since October 2022.

2.3 Surface Water Monitoring

Sampling of surface water locations was performed in accordance with the SAQP, applying methods set out in Section 3.2 of this report. The surface water sampling locations monitored as part of the OMP April 2024 biannual sampling event are presented in Table 2-2, and are shown in Figure 4, Appendix A.

Table 2-2 Surface Water Monitoring Locations

Catchment	Sampling Frequency	Location (On-Site/ Off-Site)	Number of Monitoring Locations	Monitoring Location ID
Jack in the Box Creek	Biannual	On-Site	16	SW302, SW307, SW310, SW311, SW313, SW316, SW321, SW322, SW323, SW324, SW326, SW332, SW333, SW336, SW338, and SW448.
		Off-Site	7	SW424, SW427, SW430, SW431, SW432, SW434 and SW463.
Kiewa River	Biannual	On-Site	12	SW340, SW346, SW349, SW355, SW370, SW374, SW375, SW379, SW380, SW382, SW387 and SW388.
		Off-Site	18	SW390, SW393, SW395, SW396, SW397, SW398, SW400, SW401, SW403, SW404, SW405, SW409, SW412, SW416, SW462, SW470, SW471 and SW487.

2.4 Sediment Monitoring

Sampling of sediment locations was performed in accordance with the SAQP, applying methods set out in Section 3.3 of this report. The sediment sampling locations monitored as part of the OMP April 2024 biannual sampling event are presented in Table 2-3, and are shown in Figure 5, Appendix A.

Table 2-3 Sediment Monitoring Locations and Frequency

Catchment	Sampling Frequency	Location (On-Site/ Off-Site)	Monitoring Location ID
Jack in the Box Creek	Annual (February to May)	On-Site	SD323.
		Off-Site	SD424 and SD463.
Kiewa River	Annual (February to May)	On-Site	SD346, SD355, SD375 and SD382.
		Off-Site	SD395, SD396, SD397, SD400 and SD412.

2.5 Data Management

All the data included in the report have been collected, uploaded to the ESdat database and reviewed according to the data management requirements of the Defence Contamination Management Manual (DCMM) Annex L (Defence, 2021b).

2.6 Deviations from the OMP SAQP

Deviations from the SAQP were attributed to a lack of sampling media and the resampling event as summarised in Table 2-4. On-Site and Off-Site sampling and testing was planned at 33 groundwater locations and 53 surface water locations. Sampling was completed at all groundwater locations but was only completed at 29 surface water locations. Further details are provided in Table 2-4.

Table 2-4 Deviations from the SAQP

Location	Deviation	Comment/Justification	Impact on Existing Dataset
Groundwater			

Location	Deviation	Comment/Justification	Impact on Existing Dataset
MW303	Additional non-OMP location sampled in standalone event	Provide additional data to assess PFAS plume extents	Additional sampling of non-OMP well completed as agreed with Defence to address recommendations in the OMR to provide additional data to assess PFAS plume extents.
MW305	Additional non-OMP location sampled in standalone event	Provide additional data to assess PFAS plume extents	Additional sampling of non-OMP well completed as agreed with Defence to address recommendations in the OMR to provide additional data to assess PFAS plume extents.
MW403	Not gauged during initial gauging round	Unable to access well (car blocking the well)	Minor impact on dataset as nearby wells (MW404, MW350_S and MW350_D) were able to be gauged during the initial gauging round. Subsequently gauged during sampling.
MW411	Additional non-OMP location sampled in standalone event	Provide additional data to assess PFAS plume extents	Additional sampling of non-OMP well completed as agreed with Defence to address recommendations in the OMR to provide additional data to assess PFAS plume extents.
MW412	Additional non-OMP location sampled in standalone event	Provide additional data to assess PFAS plume extents	Additional sampling of non-OMP well completed as agreed with Defence to address recommendations in the OMR to provide additional data to assess PFAS plume extents.
MW413	Additional non-OMP location sampled in standalone event	Provide additional data to assess PFAS plume extents	Additional sampling of non-OMP well completed as agreed with Defence to address recommendations in the OMR to provide additional data to assess PFAS plume extents.
MW415	Additional non-OMP location sampled in standalone event	Provide additional data to assess PFAS plume extents	Additional sampling of non-OMP well completed as agreed with Defence to address recommendations in the OMR to provide additional data to assess PFAS plume extents.
Surface Water			
SW302	Not Sampled	Location dry	Location was dry. Monitoring throughout the OMP and DSI indicates this location is consistently dry and has never had sufficient water present to sample. Therefore, this is not considered to impact on the dataset. Downstream location off-site (SW427) was sampled during this event and previous events.
SW307	Not Sampled	Location dry	Location was dry. Monitoring throughout the OMP indicates this location is ephemeral and generally dry, except following a significant rainfall event. Therefore, this is considered to have a minor impact on the dataset. Downstream locations off-site (SW424, SW427) were

Location	Deviation	Comment/Justification	Impact on Existing Dataset
			sampled during this event. Location last sampled in October 2022 and reported results above the adopted drinking water criteria for PFOS+PFHxS.
SW310[1]	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of the E6 sampling event in April 2024	Location was dry during E6 sampling event. Location was sampled on 31 May 2024 following a rain event. Monitoring throughout the OMP indicates this location is ephemeral and generally dry, except following a significant rainfall event. This is considered to have minimal impact on the dataset as the location was sampled in the second visit and the concentrations were consistent with previous historical results.
SW311[1]	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of the E6 sampling event in April 2024	Location was dry during E6 sampling event. Location was sampled on 31 May 2024 following a rain event. Monitoring throughout the OMP indicates this location is ephemeral and generally dry, except following a significant rainfall event. This is considered to have minimal impact on the dataset as the location was sampled in the second visit and the concentrations were consistent with previous historical results.
SW313	Not Sampled	Location dry	Location was dry. Monitoring throughout the OMP indicates this location is ephemeral and generally dry, except following a significant rainfall event. Therefore, this is considered to have a minor impact on the dataset. Downstream location off-site (SW427) was sampled during this event. Location last sampled in October 2023 and reported results above the adopted drinking water criteria for PFOS+PFHxS.
SW316[1]	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of the E6 sampling event in April 2024	Location was dry during E6 sampling event. Location was sampled on 31 May 2024 following a rain event. Monitoring throughout the OMP indicates this location is ephemeral and generally dry, except following a significant rainfall event. This is considered to have minimal impact on the dataset as the location was sampled in the second visit and the concentrations were consistent with previous historical results.
SW321[1]	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of the E6 sampling event in April 2024	Location was dry during E6 sampling event. Location was sampled on 31 May 2024 following a rain event. This was the first time throughout the OMP that this location was dry, and is considered to have a minor impact on the dataset as the location was sampled in the second visit and the concentrations were generally consistent with previous historical results.
SW322[1]	Sampled in standalone event following completion of	Location was dry at the time of the E6 sampling event in April 2024	Location was dry during E6 sampling event. Location was sampled on 31 May 2024 following a rain event. This was the first time throughout the OMP that this location was dry, and is considered to have a minor

Location	Deviation	Comment/Justification	Impact on Existing Dataset
	E6 OMP event.		impact on the dataset as the location was sampled in the second visit and the concentrations were generally consistent with previous historical results.
SW323[1]	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of the E6 sampling event in April 2024	Location was dry during E6 sampling event. Location was sampled on 31 May 2024 following a rain event. This was the first time throughout the OMP that this location was dry, and is considered to have a minor impact on the dataset as the location was sampled in the second visit and the concentrations were generally consistent with previous historical results, with a new minimum concentration reported during this event.
SW332[1]	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of the E6 sampling event in April 2024	Location was dry during E6 sampling event. Location was sampled on 31 May 2024 following a rain event. Monitoring throughout the OMP indicates this location is ephemeral and generally dry, except following a significant rainfall event. This is considered to have minimal impact on the dataset as the location was sampled in the second visit and the concentrations were consistent with previous historical results.
SW333[1]	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of the E6 sampling event in April 2024	Location was dry during E6 sampling event. Location was sampled on 31 May 2024 following a rain event. This location was also dry during October 2023, but sampled in a subsequent visit following rainfall in November 2023. This is considered to have minimal impact on the dataset as the location was sampled in the second visit and the concentrations were consistent with previous historical results.
SW336	Not sampled	Unable to access	Location was unable to be accessed. No downstream locations were sampled during this event. This is considered to have a minor impact on the dataset. Location last sampled in October 2023 where results were reported above the adopted drinking water criteria for PFOS+PFHxS.
SW340[1]	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of the E6 sampling event in April 2024	Location was dry during E6 sampling event. Location was sampled on 31 May 2024 following a rain event. Monitoring throughout the OMP indicates this location is ephemeral and generally dry, except following a significant rainfall event. This is considered to have minimal impact on the dataset as the location was sampled in the second visit and the concentrations were consistent with previous historical results.
SW370	Not Sampled	Location dry	Location was dry. This is the first time throughout the OMP that this location was dry, and is considered to have a minor impact on the dataset. Downstream on-site locations (SW374, SW375) were sampled during this event.

Location	Deviation	Comment/Justification	Impact on Existing Dataset
			Location last sampled in October 2023 and reported results above the adopted drinking water criteria for PFOS+PFHxS.
SW379	Not Sampled	Location dry	Location was dry. Monitoring throughout the OMP indicates this location is ephemeral and generally dry, except following a significant rainfall event. Therefore, this is considered to have a minor impact on the dataset. Downstream on-site location (SW382) was sampled during this event. Location last sampled in October 2022 and reported results above the adopted drinking water criteria for PFOS+PFHxS.
SW380	Not Sampled	Location dry	Location was dry. Monitoring throughout the OMP indicates this location is ephemeral and generally dry, except following a significant rainfall event. Therefore, this is considered to have a minor impact on the dataset. Downstream on-site location (SW382) was sampled during this event. Location last sampled in May 2023 and reported results above the adopted drinking water criteria for PFOS+PFHxS.
SW388	Not Sampled	Location dry	Location was dry. Monitoring throughout the OMP indicates this location is ephemeral and generally dry, except following a significant rainfall event. Therefore, this is considered to have a minor impact on the dataset. Downstream off-site location (SW398) was sampled during this event. Location last sampled in October 2022 and reported results above the adopted drinking water criteria for PFOS+PFHxS.
SW396	Not Sampled	Location dry	Location was dry. This is the first time throughout the OMP that this location was dry, and is considered to have a minor impact on the dataset. Other locations monitoring the oxbow lakes (SW395, SW397, SW487) and downstream off-site locations (SW398, SW404) were sampled during this event. Location last sampled in October 2023 and reported results above the adopted drinking water criteria for PFOS+PFHxS.
SW401	Not Sampled	Location dry	Location was dry. This is the first time throughout the OMP that this location was dry, and is considered to have a minor impact on the dataset. Downstream off-site location (SW404) was sampled during this event. Location last sampled in October 2023 and reported results above the adopted drinking water criteria for PFOS+PFHxS.
SW403	Not Sampled	Location dry	Location was dry. This is the first time throughout the OMP that this location was dry, and is considered to have a minor impact on the dataset. Downstream off-site location (SW404) was sampled during this event. Location

Location	Deviation	Comment/Justification	Impact on Existing Dataset
			last sampled in October 2023 and reported results above the adopted drinking water criteria for PFOS+PFHxS.
SW405	Not Sampled	Location dry	Location was dry. This is the first time throughout the OMP that this location was dry, and is considered to have a minor impact on the dataset. Downstream off-site location (SW416) was sampled during this event. Location last sampled in October 2023 and reported results above the adopted drinking water criteria for PFOS+PFHxS.
SW462[1]	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of the E6 sampling event in April 2024	Location was dry during E6 sampling event. Location was sampled on 31 May 2024 following a rain event. This was the first time throughout the OMP that this location was dry, and is considered to have a minor impact on the dataset as the location was sampled in the second visit and the concentrations were generally consistent with previous historical results. Concentrations decreased by an order of magnitude from the prior event, but are consistent with prior sampling events.
SW463	Not Sampled	Location dry	Location was dry. This is the first time throughout the OMP that this location was dry, and is considered to have a minor impact on the dataset. Downstream off-site location (SW416) was sampled during this event. Location last sampled in October 2023 and reported results above the adopted drinking water criteria for PFOS+PFHxS.
SW471	Not Sampled	Location dry	Location was dry. This is the first time throughout the OMP that this location was dry, and is considered to have a minor impact on the dataset. Downstream off-site locations (SW404, SW416) were sampled during this event. Location last sampled in October 2023 and reported results above the adopted drinking water criteria for PFOS+PFHxS.

1. Locations sampled as part of a resampling event on 31 May 2024 following a significant rainfall event.

2.7 Additional Groundwater Sampling

As agreed with Defence, Cardno (now Stantec) undertook additional groundwater sampling of non-OMP wells in May 2024: MW303, MW305 (South Bandiana), and MW411, MW412, MW413 and MW415 (private land adjacent to East Bandiana). These locations were sampled to assess the extents of the PFAS plume that is potentially migrating Off-Site, as per the 2023 OMR Recommendation Letter (Cardno, 2024a). MW414 could not be located and was not sampled during the event.

Results are included in Table B1, Appendix B and laboratory reports presented in Appendix C.

3 Methodology

3.1 Groundwater Sampling Methodology

Groundwater monitoring was undertaken as detailed in Table 3-1.

Table 3-1 Groundwater Sampling Method

Activity	Details
Dates of Field Activity	2 to 5 April 2024
Well Gauging	Standing Water Levels (SWL) were gauged using an interface probe (IP). All wells were measured against a specified mark at the top of the well casing.
Groundwater Water Quality Parameters	Groundwater water quality parameter field measurements (water quality parameters) were recorded with a water quality meter after sample collection using extra sample water from within the HydraSleeve™ decanted into a clean jar. The following water quality parameters were recorded using a water quality meter: ▪ pH. ▪ Electrical conductivity (EC). ▪ Oxidation-Reduction potential (ORP). ▪ Dissolved oxygen (DO). ▪ Temperature. Water quality parameters measured by the water quality meter were recorded on field data records. All field instruments (e.g., water quality meter) were calibrated by the equipment supplier and/or trained Cardno staff to optimise the accuracy of the measurements taken. Bump tests were also completed daily by field staff during the monitoring event. Calibration certificates and bump test records are provided in Appendix D.
Deployment of HydraSleeve™	The HydraSleeves™ were deployed with attached weights in order for sample collection to begin at the lowest point of the well screen. HydraSleeves™ were left in wells for a minimum of 4 hours when deployed with bottom weights only, to allow restabilisation of the well following the slight disturbance caused by sampler deployment, before sampling. For wells with a shallow water column, HydraSleeve™ sampling devices were deployed with both top and bottom weights and were left in the well for a minimum of 24 hours, to allow the top weight time to compress the HydraSleeve™ into the bottom of the well.
Retrieval of HydraSleeve™ (Sample Collection)	Samples were collected via the continuous pull method at a rate of approximately 30 cm per second, 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.
Sample collection by bailer or tap	As per the SAQP, where insufficient water was retrieved with the HydraSleeve™, samples were collected by bailer. For bailer sampling, wells were purged until water quality parameters were stabilised or until dry, whichever was sooner, prior to sample collection. Where sampling of a well was required from a tap due to access constraints, the well was purged by running water from the tap for one minute prior to sample collection directly into laboratory supplied sample containers.
Decontamination procedure	New HydraSleeves™ were used at each groundwater monitoring well, thus removing the need for decontamination. Where HydraSleeves™ could not be used, single use bailers were used instead which also did not require decontamination. All re-usable sampling/down-hole equipment (e.g., IP) was thoroughly washed using PFAS & phosphate-free detergent, then double rinsed with clean water before the sample collection.

Activity	Details
Sample identification, preservation transport and holding times	Each sample was labelled with the sample location, date, project identification number and sampler's initials. Sample labelling and naming was in accordance with Annex L of the DCMM (Defence, 2021b). 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 (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 and AS 4482.1 as appropriate).
Laboratory Testing	All groundwater samples were analysed for the full PFAS analytical suite (see SAQP for full list of analytes). The primary laboratory was ALS Global Laboratories (Springvale), and the secondary laboratory (quality control) was Eurofins (Dandenong South). Both laboratories are National Association of Testing Authorities (NATA)-accredited for the parameters tested. Copies of the NATA stamped laboratory reports and CoC documentation are included in Appendix C.
Laboratory Testing – Quality Control	Groundwater quality control samples were collected as follows and analysed for the full PFAS analytical suite: ▪ Field duplicate (intra-laboratory) samples at one per 10 water samples (four samples). ▪ Field triplicate (inter-laboratory) samples at one per 10 water samples (four samples). ▪ Rinsate blank samples at one per day [collected off re-used sampling/down-hole equipment] (four samples total). ▪ Trip blank samples of one per shipment included in the chilled sample containers upon transport to the laboratory (four samples total).
[1]Re-sampling event to confirm unexpected results from October 2023 sampling.	

3.2 Surface Water Sampling Methodology

Surface water monitoring was undertaken using a grab method as detailed in Table 3-2.

Table 3-2 Surface Water Sampling Method

Item	Details
Dates of Field Activity	2 to 5 April 2024. Sampling targeting locations that were dry in April was conducted on 31 May 2024 after a significant rainfall event.
Surface Water Parameters	Surface water physio-chemical parameters (i.e., pH, EC, ORP, DO, and temperature) were recorded at the time of sampling using a pre-calibrated water quality meter. Field observations such as water body type, channel width, flow, turbidity, and the presence of odours, sheen, nuisance organisms, floating debris and frothing (where observed) were also recorded on field sampling sheets.
Sampling Method	Where possible, the samples were collected directly into sample containers. Where depth permits, sample bottles were positioned at least 10 cm below the surface water level and above the sediment bed and orientated with the opening facing downwards to avoid the collection of surface films. Where access to surface water samples was difficult, the samples were collected using a long-handled sampling device with a plastic container (scoop) that was lowered directly into the water body. Samples were then 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'*.
Decontamination	All re-usable sampling equipment (telescopic pole) were thoroughly washed using phosphate-free detergent (Liquinox), and subsequently double rinsed with clean water before the sample collection.

Item	Details
Sample identification, preservation, transport and holding times.	Each sample was labelled with the sample location, date, project identification number and sampler's initials. Sample labelling and naming was in accordance with Annex L of the DCMM (Defence, 2021b). Samples were contained in 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 were undertaken in accordance with those recommended by Standards Australia (AS/NZS 5667.1:1998 and AS 4482.1 as appropriate).
Laboratory Testing	All surface water samples were analysed for the full PFAS analytical suite (see SAQP for full list of analytes). The primary laboratory was ALS Global Laboratories (Springvale), and the secondary laboratory (quality control) was Eurofins (Dandenong South). Both laboratories are NATA-accredited for the parameters tested. Copies of the NATA stamped laboratory reports and CoC documentation are included in Appendix C.
Laboratory Testing – Quality Control	Surface water quality control samples were collected as follows and analysed for the full PFAS analytical suite: ▪ Field duplicate (intra-laboratory) samples at one per 10 water samples (five samples). ▪ Field triplicate (inter-laboratory) samples at one per 10 water samples (five samples). ▪ Rinsate blank samples at one per day [collected off re-used sampling equipment] (four samples total). ▪ Trip blank samples of one per shipment included in the chilled sample containers upon transport to the laboratory (four samples total).

3.3 Sediment Sampling Methodology

Sediment monitoring was undertaken as detailed in Table 3-3.

Table 3-3 Sediment Sampling Method

Item	Details
Dates of Field Activity	2 to 5 April 2024
Sample Collection	Sediment samples were collected from the approximate midpoint of the flow pathway and collected from the top ten centimetres after removal of the immediate surface material using the appropriate tools (e.g. hand trowel, sediment corer or hand auger), with samples placed directly into appropriately labelled, laboratory supplied sample containers and packed in chilled containers for delivery to the laboratory under CoC documentation. Sediment samples were collected after the co-located surface water sample was collected to prevent agitating sediments into the water body and surface water sample matrix. At each sampling location, the sediment sample was visually assessed and observations (physical description including makeup, colour, visible signs of contamination and moisture) recorded on field data sheets.
Decontamination	All re-usable sampling equipment (hand trowel or sediment corer) were thoroughly washed using phosphate-free detergent (Liquinox), and subsequently double rinsed with clean water before the sample collection.
Sample identification, preservation, transport and holding times.	Each sample was labelled with the sample location, date, project identification number and sampler's initials. Sample labelling and naming was in accordance with Annex L of the DCMM (Defence, 2021b). Samples were contained in 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 were undertaken in accordance with those recommended by Standards Australia (AS/NZS 5667.1:1998).
Laboratory Testing	All sediment samples were analysed for the full PFAS analytical suite (see SAQP for full list of analytes).

Item	Details
	The primary laboratory was ALS Global Laboratories (Springvale), and the secondary laboratory (quality control) was Eurofins (Dandenong South). Both laboratories are NATA-accredited for the parameters tested. Copies of the NATA stamped laboratory reports and CoC documentation are included in Appendix C.
Laboratory Testing – Quality Control	Sediment quality control samples were collected as follows and analysed for the full PFAS analytical suite: ▪ Field duplicate (intra-laboratory) samples at one per 10 sediment samples (two samples). ▪ Field triplicate (inter-laboratory) samples at one per 10 sediment samples (two samples). ▪ Rinsate blank samples at one per day [collected off re-used sampling equipment] (four samples total). ▪ Trip blank samples of one per shipment included in the chilled sample containers upon transport to the laboratory (four samples total).

3.4 Quality Control (QA) / Quality Assurance (QC)

A critical aspect of site assessments is the demonstration of the quality of the data used as the basis for the assessment. This is achieved through a Data Validation process which includes a review of the following data quality indicators, as described in the SAQP:

> QA documentation.

> Bias.

> Data Representativeness.

> Data Precision & Accuracy.

> Data Comparability.

> Data Set Completeness.

A detailed review of these aspects has been undertaken, the results of which are presented in Appendix E. A summary of the data validation from the QA/QC review is included in Section 4.5 below.

3.5 Assessment Criteria

3.5.1 Groundwater and Surface Water

The adopted assessment criteria for groundwater and surface water are detailed in Table 3-4.

Table 3-4 Criteria for Groundwater and Surface Water

Exposure Scenario	Adopted Assessment Criteria		Guidance
	PFHxS / PFOS	PFOA	
	µg/L		
Human Health – Surface Water Recreational	2[2]	10	PFAS NEMP (HEPA, 2020)
Human Health – Drinking Water Quality Guideline[1]	0.07[2]	0.56	PFAS NEMP (HEPA, 2020)
Ecological (99% species protection – high conservation value systems)	0.00023[3]	19	PFAS NEMP (HEPA, 2020)
Ecological (95% species protection – slightly to moderately disturbed systems)	0.13[3]	220	PFAS NEMP (HEPA, 2020)

1. Drinking Water screening guidelines have been adopted for screening purposes for Industrial Water use, Stock Water use and Agriculture/Parks/Gardens Water use.
2. Combined PFOS and PFHxS.

3. PFOS only; For 99% species protection, the criterion of 0.00023 µg/L is lower than the laboratory LOR, however, the PFAS NEMP (HEPA, 2020) allows for the adoption of the laboratory LOR (0.01 µg/L) as a screening level rather than a quantified measurement.

4 Field Observations and Results

4.1 Conditions Impacting the Sampling Event

The total rainfall recorded prior to and during the sampling event at the nearest weather station in Wodonga (082056)[2] is detailed in Table 4-1. The monthly rainfall (20.6 mm) recorded in the month of March 2024, prior to the event, was lower than the monthly average rainfall in March of 51.6 mm from 1899 to 2023. As a result, several surface water locations were unable to be sampled during the event. Some of these locations were sampled following a significant rainfall event on the 31st May 2024 (39.0 mm).

Table 4-1 Rainfall prior to and during the event

Date	Total Rainfall (mm)
7 days prior to event (26 March 2024 to 1 April 2024)	0
Day 1 of event (2 April 2024)	9.0
Day 2 of event (3 April 2024)	0
Day 3 of event (4 April 2024)	0
Day 4 of event (5 April 2024)	0
Surface water resampling (31 May 2024)	39.0

No On-Site activities with potential to impact sample collection or results were noted.

4.2 Groundwater

4.2.1 Summary of Field Observations

4.2.1.1 Water quality parameter field measurements

Stabilised water quality parameters, water colour and turbidity observations recorded during the groundwater sampling program are presented in field sampling record sheets, included in Appendix D. Water quality parameters for all locations were generally consistent with previous events. Groundwater varied from clear to black with low to high turbidity.

4.2.1.2 Groundwater Elevation and Migration

Groundwater elevation and flow direction across the three bases included in the PFAS OMP is summarised below:

- South Bandiana: Groundwater elevations observed at South Bandiana during the sampling event ranged from 160.334 m Australian Height Datum (AHD) at MW304 to 181.335 mAHD at MW056. Slight groundwater mounding was observed at MW329, which is consistent with previous sampling events. Groundwater flow is inferred to flow in a west to north-westerly direction toward the Jack in the Box Creek. Groundwater elevations and flow direction were generally consistent with those reported during the previous sampling events.
- North Bandiana: Groundwater elevations observed at North Bandiana during the sampling event ranged from 162.995 mAHD at MW345 to 167.333 mAHD at MW342. Groundwater flow is inferred to flow in an easterly direction toward the Kiewa River. Groundwater elevations and flow direction were generally consistent with those reported during the previous sampling events.
- East Bandiana: Groundwater elevations observed at East Bandiana during the sampling event ranged from 157.745 mAHD at MW046_D to 160.145 mAHD at MW052. Groundwater flow is inferred to flow in an easterly direction toward the Kiewa River. Groundwater elevations and flow direction were generally consistent with those reported during the previous sampling events.

Groundwater elevation contours and flow directions for April 2024 are shown in Figure 2, Appendix A. Gauging data are presented in Appendix D.

[2] Climate statistics for Australian locations – summary statistics Wodonga Daily Rainfall - 082056 - Bureau of Meteorology (bom.gov.au), last accessed 8 July 2024.

4.2.2 Groundwater Laboratory Results

The results of laboratory analysis have been compared against adopted assessment criteria, and are presented in Table B1, Appendix B, and summarised in Table 4-2 below. Of the 33 primary samples that were tested, PFOA was reported above the LOR in 23 samples and PFOS+PFHxS was reported above LOR in 33 samples.

Table 4-2 Summary of Groundwater Results Exceeding Adopted Criteria

Analytes	Locations Exceeding Criteria	Lowest Criteria (µg/L)	Max Conc. (µg/L)	No. Analytical Results >LOR	No. Results Above Criteria	Significant Concentration Changes[3]
PFOS	MW009, MW012, MW016, MW018, MW020, MW029, MW034, MW035, MW042, MW043, MW046_D, MW046_I, MW052, MW056, MW304, MW307, MW312, MW342, MW345, MW346, MW350_D, MW350_S, MW351, MW352, MW353, MW354, MW357, MW360, MW361, MW403, MW404, OTH019	0.00023[2]	82.4	32	32	MW056 (increase) MW304 (increase) MW353 (decrease)
PFOA	MW052, MW307, MW350_S, MW403, MW404	0.56[1]	11.7	23	5	MW056 (increase)
PFOS+ PFHxS	MW009, MW012, MW016, MW018, MW020, MW029, MW034, MW035, MW042, MW043, MW046_D, MW046_I, MW052, MW056, MW304, MW307 MW312, MW342, MW345, MW350_D, MW350_S, MW351, MW353, MW361, MW403, MW404, OTH019	0.07[1]	178	33	27	MW056 (increase) MW304 (increase)

Note:
1. Drinking water assessment criteria.
2. Ecological assessment criteria.
3. Significant concentration change defined as an order of magnitude (10 times) increase or decrease.

Results have also been compared to available historical data. The following locations have reported a significant change in concentration for this monitoring event:

- MW056: PFOS+PFHxS has increased by two orders of magnitude from a previous result of 0.01 µg/L in October 2023 to 1.23 µg/L in this event. PFOA has also increased by one order of magnitude from <0.01 µg/L to 0.10 µg/L. PFOS has also increased by one order of magnitude from 0.01 µg/L to 0.53 µg/L. However, these results are within the historical range for MW056.
- MW304: PFOS+PFHxS has increased by one order of magnitude from a previous result of <0.01 µg/L in October 2023 to 0.51 µg/L in this event. PFOS has also increased by one order of magnitude from <0.01 µg/L to 0.19 µg/L. However, these results are within the historical range for MW304.
- MW353: PFOS has decreased by one order of magnitude from a previous result of 4.60 µg/L in October 2023 to 0.29 µg/L in this event.

A summary of locations where a first-time detection, or a new exceedance of guideline values were reported is provided in Table 4-3 below. The laboratory reports are provided in Appendix C.

Table 4-3 Summary of Groundwater Results with First-time Detections or New Exceedances of Adopted Criteria

Deviation Type	Monitoring Well	PFOS+PFHxS concentration (µg/L)		PFOA concentration (µg/L)		PFOS concentration (µg/L)	
		April 2024	Previous Maximum	April 2024	Previous Maximum	April 2024	Previous Maximum

First-time detection	MW018	**0.98**	**0.81**	0.01	<0.01	**0.46**	**0.39**
New exceedance	MW351	**0.10**	0.07	<0.01	<0.01	**0.06**	**0.01**

Note:
Location with first-time detection of PFOS+PFHxS, PFOA or PFOS in latest monitoring round
Location with a new exceedance of lowest adopted guideline values in latest monitoring round
Bold: Exceedance of lowest adopted guideline values

Findings are summarised as follows:

> One groundwater sampling location (MW018) reported a first-time detection of PFOA in April 2024.

> One groundwater sampling location (MW351) reported a new exceedance of the lowest adopted guideline value of PFOS+PFHxS in April 2024.

4.2.3 Summary of Monitoring Network Condition and Repairs

The monitoring network was observed to be generally in good condition.

Major damage was observed on the monument lid, stick up pipe and well cap at MW357. The well cap has been damaged and is unable to be put back onto the stick up to cover the well. The top of casing has been altered.

No other changes to the monitoring network condition were noted.

4.3 Surface water

4.3.1 Summary of Field Observations

4.3.1.1 Water quality parameter field measurements

Stabilised water quality parameters, water colour and turbidity observations recorded during the surface water sampling program are presented in field sampling record sheets, included in Appendix D. Notable field observations included:

> SW387 and SW448 reported decreases in DO during the April 2024 event compared to previous events.

> Water quality parameters for all other locations were generally consistent with previous events.

4.3.2 Surface Water Laboratory Results

The results of laboratory analysis have been compared against adopted assessment criteria, presented in Table B2, Appendix B, and summarised in Table 4-4 below. Of the 39 primary samples that were tested, PFOA was reported above the LOR in 13 samples, PFOS+PFHxS was reported above the LOR in 29 samples and PFOS reported above the LOR in 31 samples.

Table 4-4 Summary of Surface Water Results Exceeding Adopted Criteria

Analytes	Locations Exceeding Criteria	Lowest Criteria (µg/L)	Max Conc. (µg/L)	No. Analytical Results >LOR	No. Results Above Criteria	Significant Concentration Changes[3]
PFOS	SW324, SW326, SW338, SW346, SW349, SW355, SW374, SW375, SW387, SW395, SW397, SW400, SW409, SW412, SW427, SW430, SW431, SW432, SW448, SW470, SW487	0.00023[2]	4.68	31	31	SW424 (decrease) SW326 (decrease)
PFOA	-	0.56[1]	0.36	13	0	SW326 (decrease)

Analytes	Locations Exceeding Criteria	Lowest Criteria (µg/L)	Max Conc. (µg/L)	No. Analytical Results >LOR	No. Results Above Criteria	Significant Concentration Changes[3]
PFOS+PFHxS	SW324, SW326, SW338, SW346, SW349, SW355, SW374, SW375, SW387, SW395, SW397, SW400, SW409, SW412, SW427, SW430, SW431, SW432, SW448, SW470, SW487	0.07[1]	9.10	29	21	SW424 (decrease) SW462 (decrease)

Note:
1. Drinking water assessment criteria.
2. Ecological assessment criteria.
3. Significant concentration change defined as an order of magnitude (10 times) increase or decrease.

Results have also been compared to available historical data. The following locations have reported a significant change in concentration for this monitoring event:

- SW326: PFOS has decreased by one order of magnitude from a previous result of 2.80 µg/L in October 2023 to 0.27 µg/L in this event. PFOA has also decreased by one order of magnitude from a previous result of 0.11 µg/L to 0.01 µg/L in this event.
- SW424: PFOS has decreased by two orders of magnitude from a previous result of 1.14 µg/L in October 2023 to <0.01 µg/L in this event. PFOS+PFHxS has also decreased by two orders of magnitude from a previous result of 1.70 µg/L to <0.01 µg/L.
- SW462: PFOS+PFHxS has decreased by one order of magnitude from a previous result of 0.42 µg/L in October 2023 to 0.02 µg/L in this event.

No first-time detections of PFOS, PFOS+PFHxS or PFOA or new exceedances of guideline values were reported. The laboratory reports are provided in Appendix C.

4.4 Sediment

4.4.1 Summary of Field Observations

Odour, colour and other observations recorded during the sediment sampling program are presented in field sampling record sheets, included in Appendix D. Field observations were generally consistent with the previous monitoring event in May 2023.

4.4.2 Laboratory Results

National assessment criteria have not been established for PFAS in sediment.

Of the 12 primary samples analysed, three samples reported PFOA concentrations above the LOR, and 11 samples reported PFOS and PFOS+PFHxS concentrations above the LOR.

A summary of locations where a first-time detection was reported is provided in Table 4-5 below. The laboratory reports are provided in Appendix C.

Table 4-5 Summary of Sediment Results with First-time Detections

Deviation Type	Monitoring Well	PFOS+PFHxS concentration (µg/L)		PFOA concentration (µg/L)		PFOS concentration (µg/L)	
		April 2024	Previous Maximum	April 2024	Previous Maximum	April 2024	Previous Maximum
First-time detection	SD323	0.0217	0.0342	0.0002	<0.0002	0.0203	0.0327

Note:
Location with first-time detection of PFOS+PFHxS, PFOA or PFOS in latest monitoring round

Findings are summarised below:

- SD323 reported a first-time detection of PFOA during the April 2024 event.

- No other locations reported first-time detections of PFOS, PFOS+PFHxS or PFOA.
- No locations reported a significant change in concentration for this monitoring event.

The results of laboratory analysis have been compared against historical results, presented in Table B3, Appendix B.

4.5 Data Validation

The data validation process has concluded that there are no significant systematic errors in the data collection process. Therefore, the data set used as the basis for the surface water, groundwater and sediment assessment are considered valid and complete. A detailed Data Quality Review is included in Appendix E.

5 Summary and Conclusions

Cardno conducted the April 2024 biannual groundwater, surface water and sediment monitoring event at BMA as part of the PFAS OMP. On-Site and Off-Site sampling and testing was undertaken at 33 groundwater monitoring wells, 29 surface water locations and 12 sediment locations.

Groundwater levels were gauged in all accessible wells before sampling. Groundwater flow was interpreted to be generally consistent with October 2023 with flow in a west to north-westerly direction from South Bandiana towards Jack in the Box Creek, and flow in an easterly direction from North Bandiana and East Bandiana towards the Kiewa River.

Table 5-1 Summary of Results

Activity	Details
Deviations from OMP SAQP	> Six non-OMP groundwater locations were sampled in May 2024 as agreed with Defence to provide additional data to assess PFAS plume extents. > 23 surface water locations were not sampled in April 2024 due to locations being dry. 10 of these locations were able to be sampled following a rain event in May 2024. > One surface water location was not sampled as access to the area could not be obtained. > One groundwater location (MW403) was not gauged during the initial gauging round as a car was blocking the well.
Groundwater Analytical Results	> 33 groundwater samples were collected in total during the sampling event. > One groundwater monitoring location (MW018) reported a first-time detection for PFOA. > No locations reported a first-time detection for PFOS or PFOS+PFHxS. > One groundwater monitoring location (MW351) reported a new exceedance of adopted assessment criteria for PFOS+PFHxS. > No locations reported a new exceedance of the lowest adopted assessment criteria for PFOS or PFOA. > Two groundwater monitoring locations (MW056 and MW304) reported an order of magnitude increase for PFOS, PFOA or PFOS+PFHxS compared to October 2023. > One groundwater monitoring location (MW353) reported an order of magnitude decrease for PFOS compared to October 2023. > All other concentrations reported during this event were generally consistent with results reported in the previous event.
Surface Water Analytical Results	> 29 surface water samples were collected in total during the sampling event. > No locations reported a first-time detection for PFOS, PFOS+PFHxS or PFOA. > No locations reported a new exceedance of the lowest adopted assessment criteria for PFOS, PFOA or PFOS+PFHxS. > Two surface water location (SW326 and SW424) reported an order of magnitude decrease for PFOS, PFOA or PFOS+PFHxS compared to the previous event. > All other concentrations reported during this event were generally consistent with previous sampling events.
Sediment Analytical Results	> 12 sediment samples were collected in total. > One location (SD323) reported a first-time detection for PFOA. > No significant concentration changes were reported, and results were generally consistent with results reported in the previous event.
Next Scheduled Monitoring Event	> The next OMP monitoring event is scheduled for October 2024. > SAQP to be reviewed and updated as required prior to the next monitoring event.

6 References

General References

1. Australian and New Zealand Guidelines (ANZG; 2018). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*.
2. Defence (2021a), *PFAS OMP Factual Report Guidance*, Version 0.2, May 2021.
3. Defence (2021b), *Defence Contamination Management Manual (DCMM), Annex L – Data Management*, August 2018, Amended June 2021.
4. Environmental Protection Agency (United States EPA; 2002), EPA/240/R-02/004 *Guidance on Environmental Data Verification and Data Validation*, November 2002.
5. The Heads of EPAs Australia and New Zealand (HEPA; 2020), *PFAS National Environmental Management Plan (NEMP),* Version 2.0, January 2020.
6. National Environment Protection Council (NEPC; 2013), *National Environmental Protection (Assessment of Site Contamination) Measure* (as amended), registered May 2013.
7. National Health and Medical Research Council (2011 – updated 2018), *National Water Quality Management Strategy Australian Drinking Water Guidelines*, 6 August 2018.
8. Nation Health and Medical Research Council (NHMRC; 2019), *Guidance on Per and Poly-fluoroalkyl Substances (PFAS) in Recreational Water*, August 2019.
9. Standards Australia/Standards New Zealand (1998), AS5667.1:1998 *Water Quality – Sampling, Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples*.
10. Standards Australia (1999), AS4482.2-1999 *Guide to the investigation and sampling of sites with potentially contaminated soils, Part 1 – Non-volatile and semi-volatile compounds*.
11. USEPA (2006), *Guidance for the Data Quality Objectives Process*, EPA QA/G-4, U.S. Environmental Protection Agency.
12. USEPA (2002), *Guidance on Environmental Data Verification and Data Validation*, EPA QA/G-8, U.S. Environmental Protection Agency.

Site Specific References

13. Cardno (2024), *PFAS Ongoing Monitoring Plan Sampling and Analysis Quality Plan (SAQP) Bandiana Military Area*, Rev6, 28 March 2024.
14. Golder (2018), *Detailed Site Investigation – Bandiana Military Area – Per- and Poly-fluoroalkyl Substances (PFAS) Investigations*, 14 June 2018 (reference 1777738-081-R-RevB).
15. Golder (2020), *Human Health and Ecological Risk Assessment – Bandiana Military Area – Per- and Poly-fluoroalkyl Substances (PFAS) Investigations*, November 2020 (reference 1777738-150-R-RevB).
16. Golder (2020a), *PFAS Management Area Plan – Bandiana Military Area*, November 2020 (reference 1777738-153-R-RevA-PMAP, Final, November2020).

APPENDIX

A

FIGURES

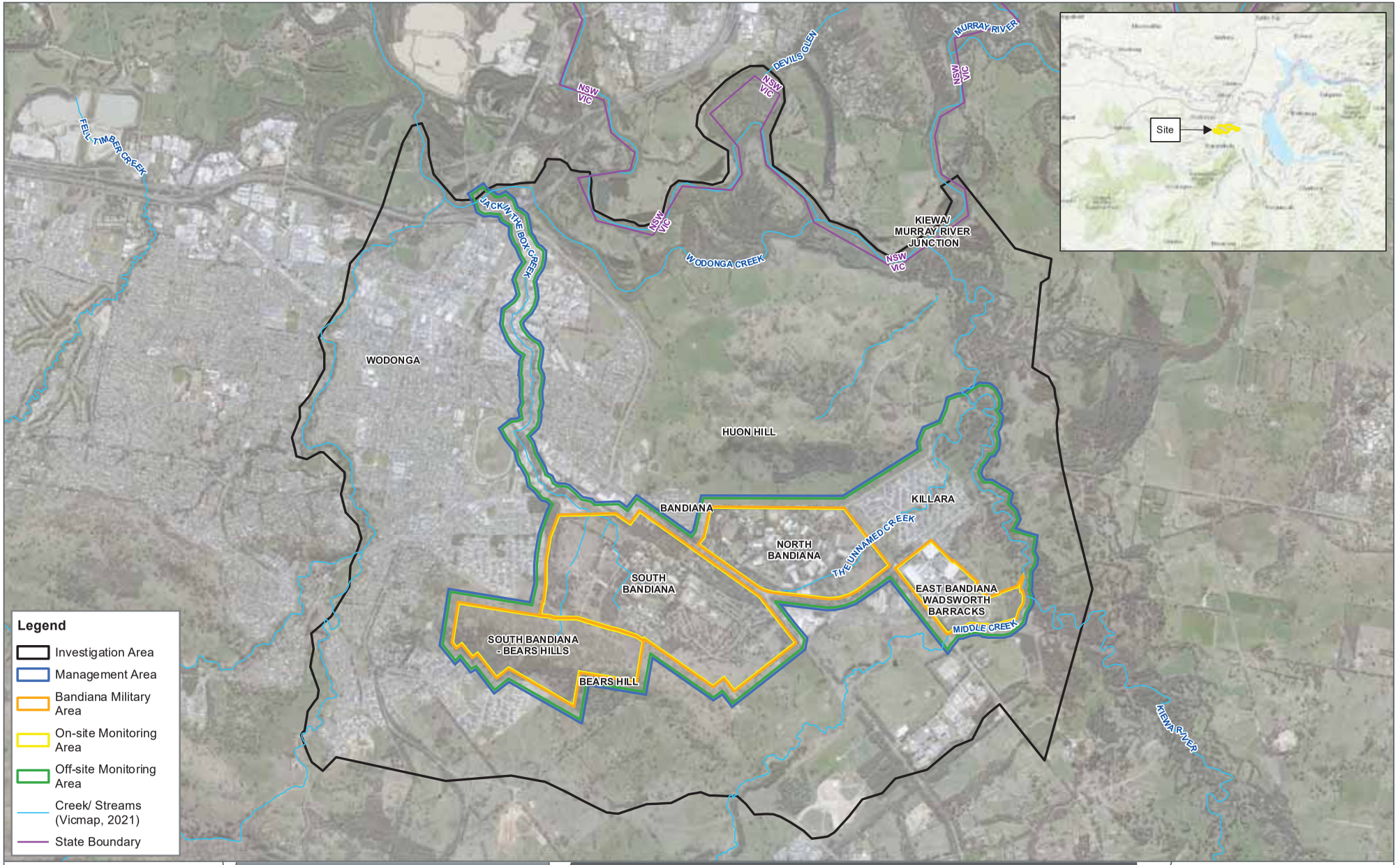


FIGURE 1

1:38,000 Scale at A3

Metres

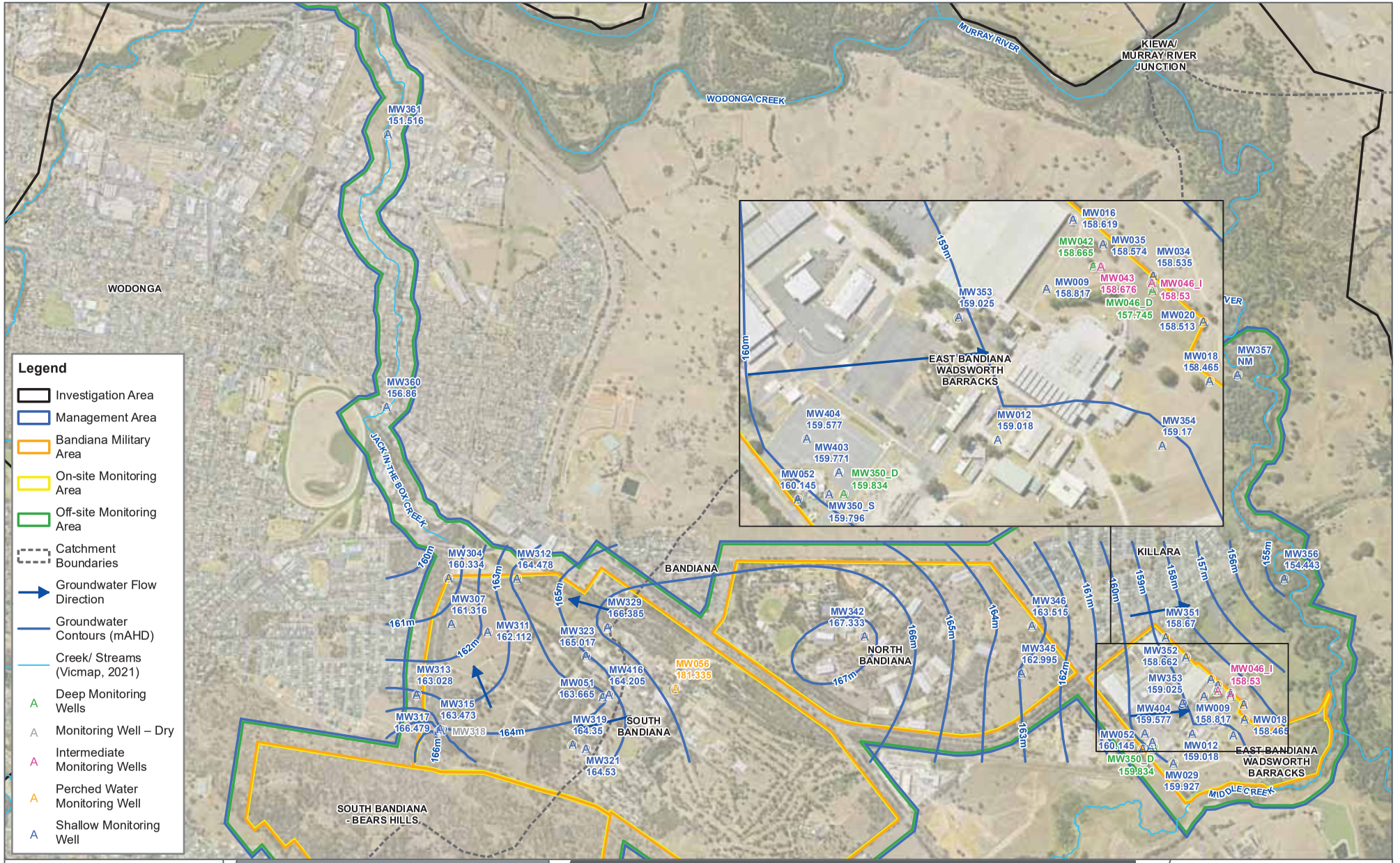
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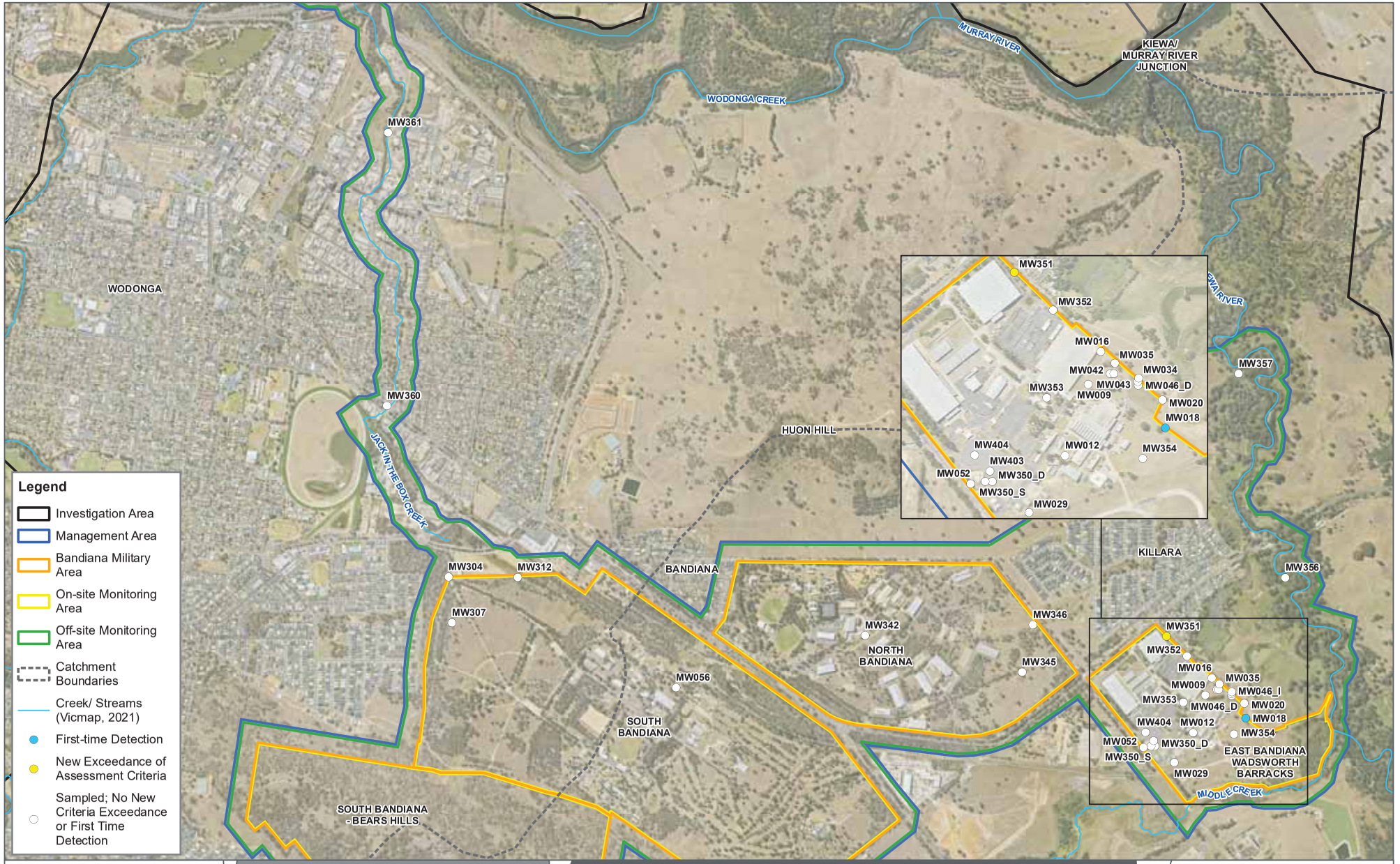
Site Locality Plan

BI-ANNUAL SAMPLING EVENT
BANDIANA MILITARY AREA
DEPARTMENT OF DEFENCE

Cardno now Stantec

Map Produced by Cardno now Stantec
Date: 2023-04-11 | Project: DEF19008
Coordinate System: GDA 1994 MGA Zone 55
Map: DEF19008-GIS-0150-SiteLocalityPlan_Bandiana.mxd 02
Aerial Imagery Supplied by Metromap (March, 2021)


Legend
Investigation Area
Management Area
Bandiana Military Area
On-site Monitoring Area
Off-site Monitoring Area
Catchment Boundaries
Groundwater Flow Direction
Groundwater Contours (mAHD)
Creek/ Streams (Vicmap, 2021)
Deep Monitoring Wells
Monitoring Well – Dry
Intermediate Monitoring Wells
Perched Water Monitoring Well
Shallow Monitoring Well
WODONGA
WODONGA CREEK
MURRAY RIVER
KIEWA/ MURRAY RIVER JUNCTION
JACK IN THE BOX CREEK
BANDIANA
NORTH BANDIANA
SOUTH BANDIANA
SOUTH BANDIANA - BEARS HILLS
EAST BANDIANA WADSWORTH BARRACKS
KILLARA
MIDDLE CREEK
MW361 151.516
MW360 156.86
MW304 160.334
MW307 161.316
MW313 163.028
MW315 163.473
MW317 166.479
MW318
MW312 164.478
MW311 162.112
MW323 165.017
MW329 166.385
MW051 163.665
MW416 164.205
MW319 164.35
MW321 164.53
MW056 181.335
MW342 167.333
MW345 162.995
MW346 163.515
MW351 158.67
MW352 158.662
MW353 159.025
MW404 159.577
MW403 159.771
MW052 160.145
MW350_S 159.796
MW350_D 159.834
MW012 159.018
MW354 159.17
MW016 158.619
MW042 158.665
MW035 158.574
MW034 158.535
MW009 158.817
MW043 158.676
MW046_I 158.53
MW046_D 157.745
MW020 158.513
MW018 158.465
MW357 NM
MW356 154.443
MW029 159.927
159m
160m
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163m
164m
165m
166m
167m
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156m
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158m
FIGURE 2
1:20,000 Scale at A3
Metres
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1,000
Groundwater Elevation Contours - Regional Aquifer (April, 2024)
BIANNUAL SAMPLING EVENT
BANDIANA MILITARY AREA
DEPARTMENT OF DEFENCE
Cardno now Stantec
Map Produced by Cardno now Stantec
Date: 2024-05-09 | Project: DEF19008
Coordinate System: GDA 1994 MGA Zone 55
Map: DEF19008-GS-0449-GW_ElevContours_RegionalA_B_E6.mxd 02
Aerial Imagery Supplied by Metromap


MURRAY RIVER
KIEWA/
MURRAY RIVER
JUNCTION
WODONGA CREEK
MW361
WODONGA
MW360
JACK IN THE BOX CREEK
HUON HILL
MW351
MW352
MW016
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MW012
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MW403
MW052
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MW350_S
MW029
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KILLARA
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MW342
MW346
NORTH
BANDIANA
MW345
MW056
SOUTH
BANDIANA
SOUTH BANDIANA
- BEARS HILLS
MW046_I
EAST BANDIANA
WADSWORTH
BARRACKS
MIDDLE CREEK
Legend
Investigation Area
Management Area
Bandiana Military Area
On-site Monitoring Area
Off-site Monitoring Area
Catchment Boundaries
Creek/ Streams (Vicmap, 2021)
First-time Detection
New Exceedance of Assessment Criteria
Sampled; No New Criteria Exceedance or First Time Detection
FIGURE 3
1:20,000 Scale at A3
Metres
0
500
1,000
PFAS Results Summary - Groundwater (April, 2024)
BIANNUAL SAMPLING EVENT
BANDIANA MILITARY AREA
DEPARTMENT OF DEFENCE
N
Cardno now Stantec
Map Produced by Cardno now Stantec
Date: 2024-07-09 | Project: DEF19008
Coordinate System: GDA 1994 MGA Zone 55
Map: DEF19008-GS-0450-GW_PFAS_Results_Summary_B_E6.mxd 03
Aerial Imagery Supplied by Metromap

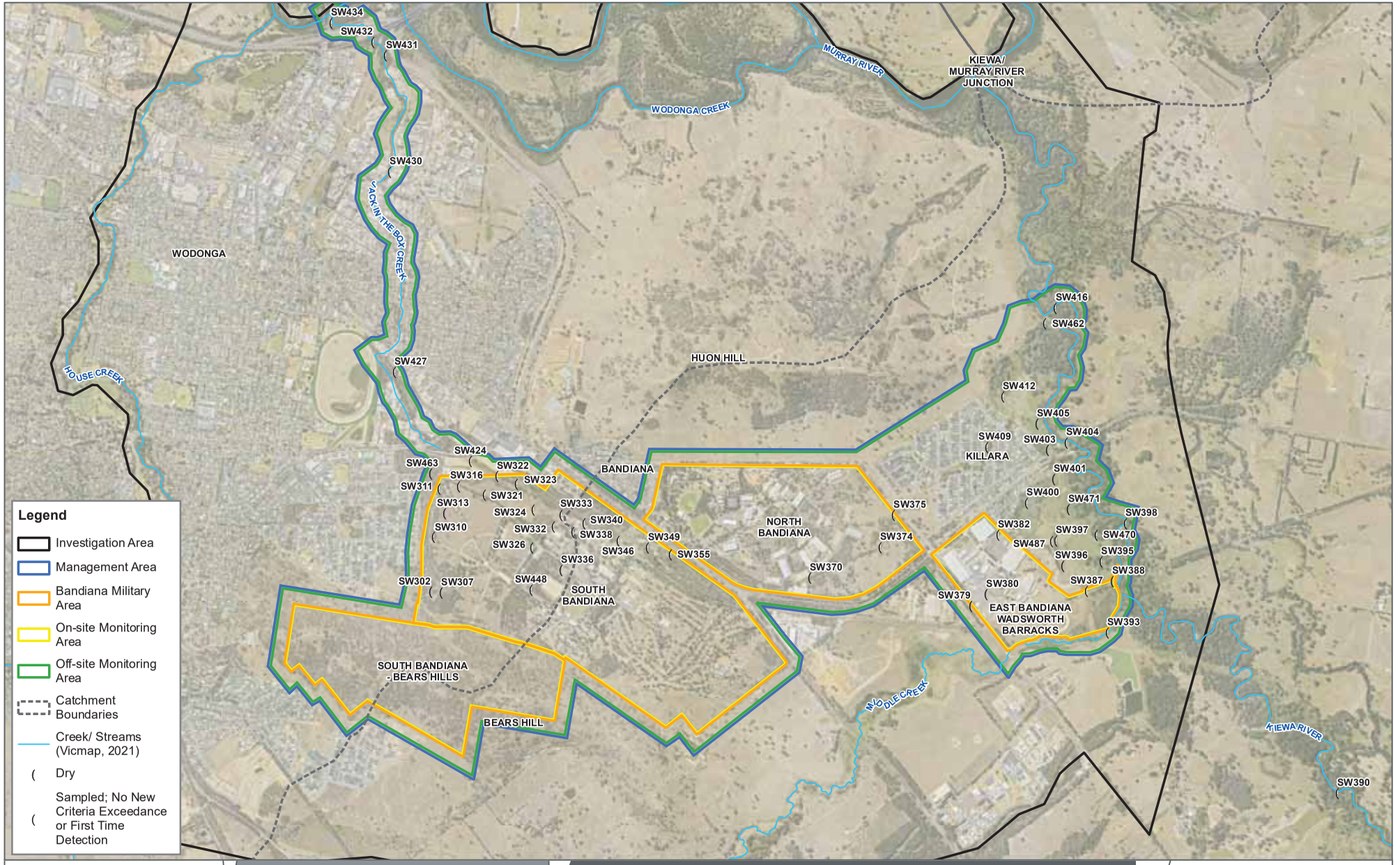


FIGURE 4

1:26,000 Scale at A3

Metres

0 500 1,000

PFAS Results Summary - Surface Water (April-May 2024)

BIANNUAL SAMPLING EVENT
BANDIANA MILITARY AREA
DEPARTMENT OF DEFENCE

Cardno now Stantec

Map Produced by Cardno now Stantec
Date: 2024-05-02 | Project: DEF19008
Coordinate System: GDA 1994 MGA Zone 55
Map: DEF19008-GS-0451-SW_PFAS_Results_Summary_B_E6.mxd 01
Aerial Imagery Supplied by Metromap

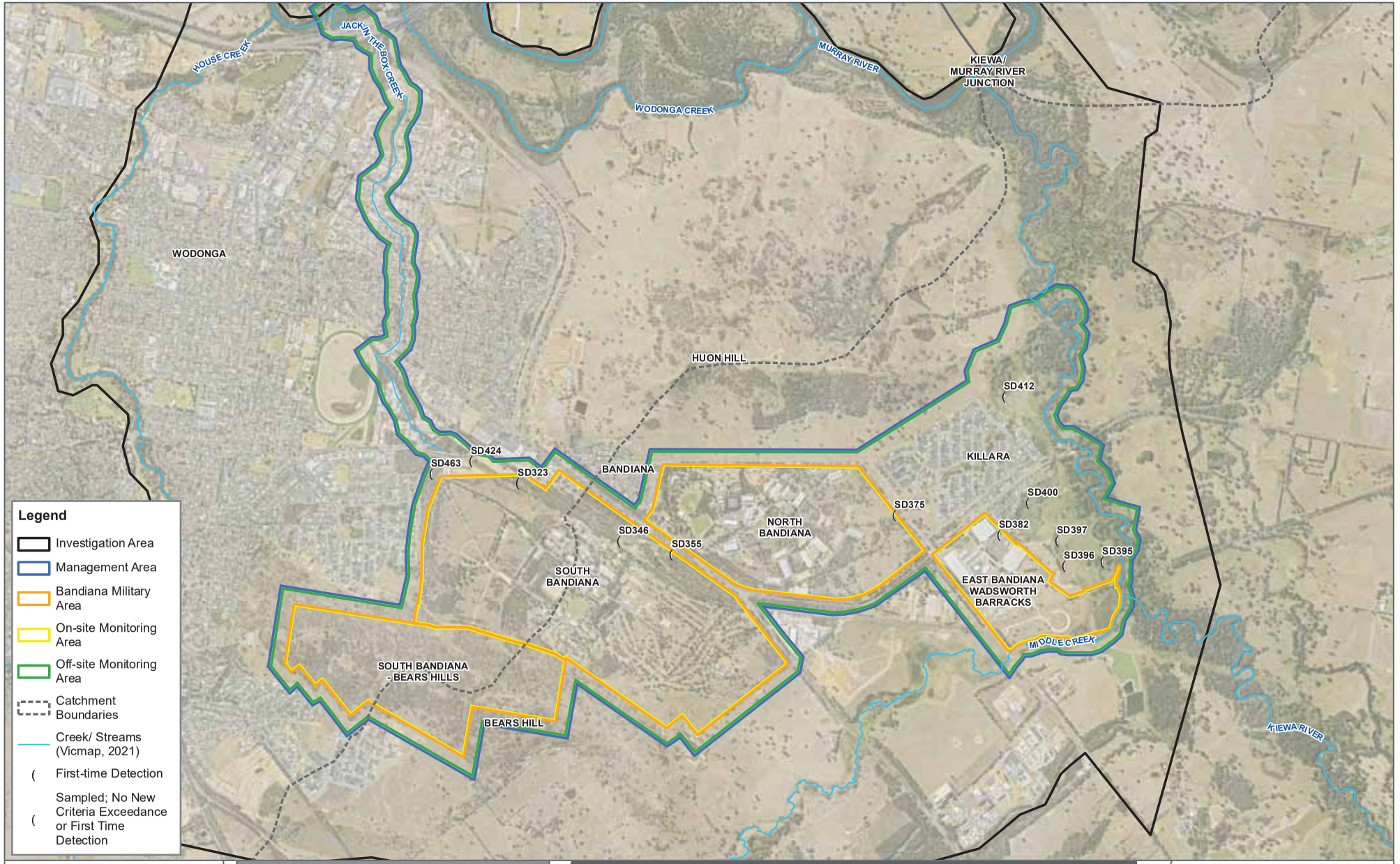


FIGURE 5

1:26,000 Scale at A3

Metres

0 500 1,000

PFAS Results Summary - Sediment (April, 2024)

BIANNUAL SAMPLING EVENT
BANDIANA MILITARY AREA
DEPARTMENT OF DEFENCE

Cardno now Stantec

Map Produced by Cardno now Stantec
Date: 2024-05-02 | Project: DEF19008
Coordinate System: GDA 1994 MGA Zone 55
Map: DEF19008-GS-0452-SED_PFAS_Results_Summary_B_E6.mxd 01
Aerial Imagery Supplied by Metromap

APPENDIX

B

DATA ASSESSMENT TABLES

																					Perfluorocarbons	
					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**															
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*															
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220																
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*																
Location Code	Date	Field ID	Sample Type	Lab Report Number																		
MW009	28 Nov 2017	0445E_MW09_S_171128	Normal	ES1730397	*3.32*	0.45	*9.92*		1.28	1.40	6.60	0.30	<0.02	0.3	0.40	1.85		0.29	<0.02	<0.02	<0.02	<0.02
	16 Nov 2021	0445_MW009_211116	Normal	EM2122998	*2.67*	0.43	*6.81*		0.95	0.86	4.14	0.45	<0.02	0.2	0.34	1.36		0.25	<0.02	<0.02	<0.02	<0.02
	05 May 2022	0445_MW009_220505	Normal	EM2208381	*3.50*	0.44	*9.69*		0.99	1.11	6.19	0.37	<0.02	0.2	0.40	1.32		0.29	<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_MW009_221013	Normal	EM2220286	*3.16*	0.35	*8.31*		0.82	0.82	5.15	0.32	<0.02	0.2	0.28	1.22		0.20	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW009_230505	Normal	EM2308015	*4.07*	0.25	*7.32*		0.48	0.53	3.25	0.25	<0.02	<0.1	0.19	0.87		0.14	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW009_20231026	Normal	EM2319356	*9.98*	**0.71**	*20.2*		1.35	1.55	10.2	0.81	<0.02	0.3	0.60	2.57		0.38	<0.02	<0.02	<0.02	<0.02
		0445_QC107_20231026	Field_D	EM2319356	*8.79*	**0.63**	*17.1*		1.24	1.30	8.35	0.70	<0.02	0.2	0.52	2.31		0.34	<0.02	<0.02	<0.02	<0.02
		0445_QC207_20231026	Interlab_D	1039507	*9.5*	**0.61**	*17.3*		1.1	1.1	7.8	0.74	<0.01	0.30	0.44	1.8	0.44	0.31	<0.01	<0.01	<0.01	<0.01
	04 Apr 2024	0445_MW009_240404	Normal	EM2405446	*6.84*	0.56	*15.6*		1.11	1.53	8.71	0.62	<0.02	0.3	0.50	2.06		0.31	<0.02	<0.02	<0.02	<0.02
MW012	28 Nov 2017	0445E_MW12_S_171128	Normal	ES1730397	*0.04*	<0.01	**0.30**		<0.02	<0.02	0.26	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445E_QC100_171128	Field_D	ES1730397	*0.05*	<0.01	**0.37**		<0.02	<0.02	0.32	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	12 Nov 2021	0445_MW012_211111	Normal	EM2122518	*0.07*	<0.01	**0.43**		<0.02	<0.02	0.36	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	05 May 2022	0445_MW012_220505	Normal	EM2208381	*0.09*	<0.01	**0.54**		0.02	0.03	0.45	<0.02	<0.02	<0.1	<0.02	0.03		<0.02	<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_MW012_221013	Normal	EM2220286	*0.03*	<0.01	**0.18**		0.03	<0.02	0.15	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW012_230505	Normal	EM2308015	*0.08*	<0.01	**0.31**		<0.02	<0.02	0.23	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW012_20231026	Normal	EM2319356	*0.17*	<0.01	**0.41**		<0.02	<0.02	0.24	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW012_240404	Normal	EM2405446	*0.08*	<0.01	**0.32**		<0.02	<0.02	0.24	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
MW016	28 Nov 2017	0445E_MW16_S_171128	Normal	ES1730397	*7.35*	0.39	*11.6*		0.62	0.66	4.22	0.32	<0.02	0.1	0.20	0.95		0.20	<0.02	<0.02	<0.02	<0.02
	16 Nov 2021	0445_MW016_211116	Normal	EM2122998	*4.38*	0.31	*7.42*		0.40	0.40	3.04	0.25	<0.02	<0.1	0.16	0.68		0.15	<0.02	<0.02	<0.02	<0.02
	09 May 2022	0445_MW016_220509	Normal	EM2208649	*6.14*	0.33	*9.36*		0.45	0.42	3.22	0.27	<0.02	<0.1	0.16	0.61		0.16	<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_MW016_221013	Normal	EM2220286	*4.93*	0.29	*7.78*		0.40	0.42	2.85	0.21	<0.02	<0.1	0.13	0.65		0.14	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW016_230505	Normal	EM2308015	*2.38*	0.15	*3.90*		0.23	0.22	1.52	0.12	<0.02	<0.1	0.08	0.38		0.08	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW016_20231026	Normal	EM2319356	*6.78*	0.37	*10.4*		0.52	0.54	3.66	0.36	<0.02	<0.1	0.19	0.94		0.19	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW016_240404	Normal	EM2405446	*4.43*	0.29	*7.70*		0.42	0.51	3.27	0.24	<0.02	<0.1	0.17	0.75		0.15	<0.02	<0.02	<0.02	<0.02
MW018	28 Nov 2017	0445E_MW18_S_171128	Normal	ES1730397	*0.13*	<0.01	**0.31**		0.02	<0.02	0.18	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	16 Nov 2021	0445_MW018_211116	Normal	EM2122998	*0.32*	<0.01	**0.67**		0.06	0.05	0.35	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	05 May 2022	0445_MW018_220505	Normal	EM2208381	*0.33*	<0.01	**0.66**		0.06	0.05	0.33	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_MW018_221013	Normal	EM2220286	*0.06*	<0.01	**0.16**		0.02	<0.02	0.10	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW018_230505	Normal	EM2308015	*0.35*	<0.01	**0.67**		0.05	0.04	0.32	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW018_20231026	Normal	EM2319356	*0.39*	<0.01	**0.81**		0.09	0.05	0.42	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW018_240404	Normal	EM2405446	*0.46*	0.01	**0.98**		0.07	0.08	0.52	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
MW020	28 Nov 2017	0445E_MW20_S_171128	Normal	ES1730397	*0.72*	0.05	*2.34*		0.11	0.14	1.62	0.05	<0.02	<0.1	0.03	0.19		<0.02	<0.02	<0.02	<0.02	<0.02
	16 Nov 2021	0445_MW020_211116	Normal	EM2122998	*1.54*	0.07	*3.38*		0.15	0.16	1.84	0.09	<0.02	<0.1	0.05	0.23		0.03	<0.02	<0.02	<0.02	<0.02
	03 May 2022	0445_MW020_220503	Normal	EM2208381	*1.29*	0.06	*2.77*		0.13	0.15	1.48	0.07	<0.02	<0.1	0.05	0.17		0.02	<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_MW020_221013	Normal	EM2220286	*1.15*	0.05	*2.42*		0.09	0.11	1.27	0.06	<0.02	<0.1	0.03	0.15		<0.02	<0.02	<0.02	<0.02	<0.02
	06 May 2023	0445_MW020_230506	Normal	EM2308015	*0.93*	0.04	*2.03*		0.08	0.10	1.10	0.06	<0.02	<0.1	0.03	0.13		<0.02	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW020_20231026	Normal	EM2319356	*1.00*	0.06	*2.78*		0.09	0.11	1.78	0.09	<0.02	<0.1	0.04	0.19		0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW020_240404	Normal	EM2405446	*1.31*	0.05	*2.67*		0.08	0.10	1.36	0.06	<0.02	<0.1	0.03	0.17		0.02	<0.02	<0.02	<0.02	<0.02
MW029	11 Dec 2017	0445E_MW29_S_171211	Normal	ES1731478	*0.38*	0.04	**0.87**		0.12	0.11	0.49	<0.02	<0.02	<0.1	0.19	0.22		0.06	<0.02	<0.02	<0.02	<0.02
	11 Nov 2021	0445_MW029_211111	Normal	EM2122518	*0.44*	0.06	**1.15**		0.13	0.13	0.71	0.02	<0.02	<0.1	0.16	0.25		0.08	<0.02	<0.02	<0.02	<0.02
	05 May 2022	0445_MW029_220505	Normal	EM2208381	*0.64*	0.05	**1.28**		0.18	0.14	0.64	<0.02	<0.02	<0.1	0.22	0.29		0.10	<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_MW029_221013	Normal	EM2220286	*0.43*	0.03	**0.87**		0.06	0.06	0.44	<0.02	<0.02	<0.1	0.07	0.13		0.04	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW029_230505	Normal	EM2308015	*0.46*	0.04	**1.03**		0.12	0.13	0.57	<0.02	<0.02	<0.1	0.12	0.26		0.07	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW029_20231026	Normal	EM2319356	*0.37*	0.04	**0.95**		0.10	0.10	0.58	<0.02	<0.02	<0.1	0.12	0.25		0.07	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW029_240404	Normal	EM2405446	*0.24*	0.02	**0.69**		0.06	0.07	0.45	<0.02	<0.02	<0.1	0.05	0.12		0.04	<0.02	<0.02	<0.02	<0.02
MW034	28 Nov 2017	0445E_MW34_S_171128	Normal	ES1730397	*0.73*	0.06	**1.59**		0.10	0.12	0.86	0.02	<0.02	<0.1	0.04	0.13		0.02	<0.02	<0.02	<0.02	<0.02
	16 Nov 2021	0445_MW034_211116	Normal	EM2122998	*1.86*	0.12	*3.46*		0.26	0.21	1.60	0.13	<0.02	<0.1	0.09	0.34		0.06	<0.02	<0.02	<0.02	<0.02
	03 May 2022	0445_MW034_220503	Normal	EM2208381	*1.57*	0.06	*2.57*		0.14	0.14	1.00	0.08	<0.02	<0.1	0.06	0.16		0.04	<0.02	<0.02	<0.02	<0.02
		0445_QC106_220503	Field_D	EM2208381	*1.27*	0.06	*2.35*		0.13	0.14	1.08	0.07	<0.02	<0.1	0.05	0.16		0.03	<0.02	<0.02	<0.02	<0.02
		0445_QC206_220503	Interlab_D	886780	*2.1*	0.09	*3.3*	<0.01	0.14	0.15	1.2	0.06	<0.01	<0.05	0.05	0.20	0.06	0.04	<0.01	<0.01	<0.01	<0.01
	13 Oct 2022	0445_MW034_221013	Normal	EM2220286	*1.17*	0.05	**1.93**		0.09	0.09	0.76	0.05	<0.02	<0.1	0.03	0.12		0.02	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW034_230505	Normal	EM2308015	*1.02*	0.03	**1.50**		0.05	0.06	0.48	0.04	<0.02	<0.1	<0.02	0.08		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC109_230505	Field_D	EM2308015	*0.97*	0.03	**1.45**		0.05	0.06	0.48	0.03	<0.02	<0.1	<0.02	0.08		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC209_230505	Interlab_D	987797	*1.1*	0.03	**1.59**		0.05	0.05	0.49	0.04	<0.01	<0.05	0.02	0.07	0.01	0.01	<0.01	<0.01	<0.01	<0.01
	26 Oct 2023	0445_MW034_20231026	Normal	EM2319356	*0.85*	0.03	**1.36**		0.04	0.04	0.51	0.04	<0.02	<0.1	<0.02	0.07		<0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW034_240404	Normal	EM2405446	*1.04*	0.03	**1.58**		0.05	0.05	0.54	0.04	<0.02	<0.1	0.02	0.08		<0.02	<0.02	<0.02	<0.02	<0.02

					Perfluorocarbons																
					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**															
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*															
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220																
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*																
Location Code	Date	Field ID	Sample Type	Lab Report Number																		
MW035	28 Nov 2017	0445E_MW35_S_171128	Normal	ES1730397	*3.97*	0.54	*12.1*		1.72	1.74	8.16	0.39	<0.02	0.4	0.55	2.40		0.41	<0.02	<0.02	<0.02	<0.02
	16 Nov 2021	0445_MW035_211116	Normal	EM2122998	*3.32*	0.45	*7.45*		0.93	0.87	4.13	0.39	<0.02	0.2	0.34	1.41		0.26	<0.02	<0.02	<0.02	<0.02
	03 May 2022	0445_MW035_220503	Normal	EM2208381	*5.07*	**0.59**	*12.4*		1.16	1.27	7.38	0.49	<0.02	0.2	0.48	1.62		0.35	<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_MW035_221013	Normal	EM2220286	*5.96*	**0.59**	*14.5*		1.29	1.39	8.51	0.58	<0.02	0.2	0.44	1.98		0.34	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW035_230505	Normal	EM2308015	*7.66*	0.50	*14.7*		1.07	1.27	7.02	0.56	<0.02	0.2	0.44	1.88		0.30	<0.02	<0.02	<0.02	<0.02
		0445_QC106_230505	Field_D	EM2308015	*7.41*	0.56	*14.8*		1.21	1.06	7.35	0.54	<0.02	0.3	0.47	1.68		0.34	<0.02	<0.02	<0.02	<0.02
		0445_QC206_230505	Interlab_D	987797	*8.3*	**0.65**	*15.9*		1.1	1.1	7.6	0.78	<0.01	0.27	0.39	1.6	0.45	0.30	<0.01	<0.01	<0.01	<0.01
	26 Oct 2023	0445_MW035_20231026	Normal	EM2319356	*8.75*	0.53	*16.0*		1.08	1.24	7.21	0.58	<0.02	0.2	0.40	1.71		0.30	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW035_240404	Normal	EM2405446	*8.22*	0.50	*15.5*		1.03	1.28	7.32	0.57	<0.02	0.3	0.44	1.73		0.29	<0.02	<0.02	<0.02	<0.02
MW042	28 Nov 2017	0445E_MW42_D_171128	Normal	ES1730397	*5.66*	**0.70**	*15.4*		1.99	2.07	9.76	0.50	<0.02	0.4	0.64	2.88		0.47	<0.02	<0.02	<0.02	<0.02
	11 Nov 2021	QC204_211111	Interlab_D	841785	*4.3*	**0.65**	*11.3*	<0.01	1.2	0.96	7.0	0.57	<0.01	0.33	0.36	1.9	0.53	0.32	<0.01	<0.01	<0.01	<0.01
		0445_MW042_211111	Normal	EM2122518	*3.61*	0.49	*8.66*		0.92	1.13	5.05	0.49	<0.02	0.2	0.35	1.62		0.31	<0.02	<0.02	<0.02	<0.02
		0445_QC104_211111	Field_D	EM2122518	*3.30*	0.46	*8.79*		0.99	0.81	5.49	0.38	<0.04	<0.2	0.33	1.52		0.24	<0.04	<0.04	<0.04	<0.04
	03 May 2022	0445_MW042_220503	Normal	EM2208381	*6.03*	**0.66**	*15.4*		1.42	1.57	9.35	0.56	<0.02	0.3	0.59	2.02		0.43	<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_MW042_221013	Normal	EM2220286	*6.41*	**0.60**	*15.1*		1.29	1.40	8.70	0.59	<0.02	0.2	0.44	2.13		0.34	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW042_230505	Normal	EM2308015	*7.12*	0.48	*13.6*		1.04	1.00	6.49	0.54	<0.02	0.2	0.40	1.72		0.28	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW042_20231026	Normal	EM2319356	*7.94*	0.50	*14.8*		1.00	1.08	6.87	0.61	<0.02	0.2	0.40	1.72		0.28	<0.02	<0.02	<0.02	<0.02
		0445_QC108_20231026	Field_D	EM2319356	*7.03*	0.46	*13.5*		0.93	1.05	6.48	0.53	<0.02	0.2	0.37	1.59		0.26	<0.02	<0.02	<0.02	<0.02
		0445_QC208_20231026	Interlab_D	1039507	*7.4*	0.45	*13.2*		0.87	1.1	5.8	0.60	<0.01	0.22	0.33	1.3	0.33	0.24	<0.01	<0.01	<0.01	<0.01
	04 Apr 2024	0445_MW042_240404	Normal	EM2405446	*7.36*	0.43	*13.6*		0.83	1.03	6.23	0.49	<0.02	0.2	0.38	1.52		0.24	<0.02	<0.02	<0.02	<0.02
MW043	28 Nov 2017	0445E_MW43_I_171128	Normal	ES1730397	*10.5*	**1.09**	*32.0*		3.11	3.28	21.5	0.88	<0.02	0.7	1.06	4.85		0.71	<0.02	<0.02	<0.02	<0.02
	16 Nov 2021	0445_MW043_211116	Normal	EM2122998	*5.33*	**0.76**	*12.9*		1.60	1.73	7.54	0.81	<0.02	0.4	0.61	2.51		0.43	<0.02	<0.02	<0.02	<0.02
	03 May 2022	0445_MW043_220503	Normal	EM2208381	*6.91*	**0.70**	*16.6*		1.52	1.63	9.65	0.59	<0.02	0.3	0.64	2.04		0.44	<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_MW043_221013	Normal	EM2220286	*8.10*	0.53	*16.0*		1.14	1.20	7.92	0.54	<0.02	0.2	0.41	1.81		0.31	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW043_230505	Normal	EM2308015	*5.69*	0.36	*10.4*		0.75	0.74	4.68	0.40	<0.02	0.1	0.31	1.26		0.21	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW043_20231026	Normal	EM2319356	*6.46*	0.37	*11.2*		0.70	0.74	4.74	0.46	<0.02	0.1	0.30	1.22		0.20	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW043_240404	Normal	EM2405446	*6.44*	0.36	*11.5*		0.66	0.84	5.07	0.42	<0.02	0.2	0.32	1.19		0.20	<0.02	<0.02	<0.02	<0.02
MW046_D	28 Nov 2017	0445E_MW46_D_171128	Normal	ES1730397	*2.05*	0.14	*4.31*		0.34	0.36	2.26	0.14	<0.02	<0.1	0.12	0.49		0.08	<0.02	<0.02	<0.02	<0.02
	16 Nov 2021	0445_MW046_D_211116	Normal	EM2122998	*3.24*	0.19	*5.50*		0.40	0.28	2.26	0.19	<0.02	<0.1	0.16	0.52		0.10	<0.02	<0.02	<0.02	<0.02
	03 May 2022	0445_MW046D_220503	Normal	EM2208381	*2.88*	0.16	*4.97*		0.37	0.30	2.09	0.17	<0.02	<0.1	0.14	0.41		0.09	<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_MW046_D_221013	Normal	EM2220286	*1.60*	0.06	*2.77*		0.13	0.13	1.17	0.07	<0.02	<0.1	0.05	0.21		0.03	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW046_D_230505	Normal	EM2308015	*1.65*	0.05	*2.82*		0.11	0.15	1.17	0.07	<0.02	<0.1	0.04	0.18		0.02	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW046_D_20231026	Normal	EM2319356	*2.46*	0.08	*4.26*		0.15	0.17	1.80	0.11	<0.02	<0.1	0.05	0.26		0.03	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW046_D_240404	Normal	EM2405446	*2.35*	0.08	*4.18*		0.15	0.18	1.83	0.11	<0.02	<0.1	0.06	0.28		0.03	<0.02	<0.02	<0.02	<0.02
MW046_I	28 Nov 2017	0445E_MW47_I_171128	Normal	ES1730397	*1.99*	0.16	*4.27*		0.32	0.35	2.28	0.14	<0.02	<0.1	0.12	0.50		0.08	<0.02	<0.02	<0.02	<0.02
	16 Nov 2021	0445_MW046_I_211116	Normal	EM2122998	*2.96*	0.17	*5.26*		0.38	0.30	2.30	0.19	<0.02	<0.1	0.15	0.50		0.09	<0.02	<0.02	<0.02	<0.02
	04 May 2022	0445_MW046I_220503	Normal	EM2208381	*2.17*	0.10	*3.59*		0.20	0.20	1.42	0.11	<0.02	<0.1	0.08	0.24		0.06	<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_MW046_I_221013	Normal	EM2220286	*1.76*	0.06	*2.98*		0.13	0.14	1.22	0.08	<0.02	<0.1	0.04	0.20		0.03	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW046_I_230505	Normal	EM2308015	*1.54*	0.05	*2.64*		0.12	0.14	1.10	0.07	<0.02	<0.1	0.04	0.19		0.02	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW046I_20231026	Normal	EM2319356	*2.48*	0.08	*4.14*		0.15	0.15	1.66	0.10	<0.02	<0.1	0.05	0.26		0.03	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW046_I_240404	Normal	EM2405446	*2.30*	0.08	*4.08*		0.13	0.18	1.78	0.11	<0.02	<0.1	0.06	0.26		0.03	<0.02	<0.02	<0.02	<0.02
		0445_QC108_240404	Field_D	EM2405446	*1.97*	0.07	*3.92*		0.12	0.19	1.95	0.07	<0.02	<0.1	0.06	0.27		0.03	<0.02	<0.02	<0.02	<0.02
		0445_QC208_240404	Interlab_D	1086312	*2.1*	0.08	*3.6*		0.14	0.16	1.5	0.08	<0.01	<0.05	0.06	0.24	0.06	0.03	<0.01	<0.01	<0.01	<0.01
MW051	04 Dec 2017	0445S_MW04_S_171204	Normal	ES1731167	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05
	10 Nov 2021	QC200_211110	Interlab_D	841785	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	11 Nov 2021	0445_MW051_211110	Normal	EM2122518	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	12 Nov 2021	0445_QC100_211110	Field_D	EM2122518	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_MW051_20221012	Normal	EM2220286	*0.01*	<0.01	0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC104_20221012	Field_D	EM2220286	*0.01*	<0.01	0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC204_221012	Interlab_D	932350	*0.02*	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	25 Oct 2023	0445_MW051_20231025	Normal	EM2319356	*0.08*	<0.01	**0.13**		<0.02	<0.02	0.05	<0.02	<0.02	<0.1	<0.02	0.03		<0.02	<0.02	<0.02	<0.02	<0.02
	28 Nov 2023	0445_MW051_231128	Normal	EM2321318	*0.09*	0.01	**0.16**		<0.02	<0.02	0.07	<0.02	<0.02	<0.1	0.03	0.05		<0.02	<0.02	<0.02	<0.02	<0.02

Table B1: Groundwater Analytical Results

																				Perfluorocarbons		
					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**															
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*															
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220																
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*																
Location Code	Date	Field ID	Sample Type	Lab Report Number																		
MW052	01 Jun 2012	0445E_MW06-A_120601	Normal	ES1213811	*1.24*	**0.94**																
		0445E_QC103_120601	Field_D	ES1213811	*1.18*	**0.91**																
	07 Mar 2017	0445_MW06_070307	Normal	163195	*6.6*	**3.2**					53											
	11 Dec 2017	0445E_MW06A_S_171211	Normal	ES1731478	*7.17*	**1.37**	*26.5*		2.86	3.18	19.3	0.45	<0.02	0.6	1.24	4.23		0.98	<0.02	<0.02	<0.02	<0.02
	16 Nov 2021	0445_MW052_211116	Normal	EM2122998	*7.23*	**0.67**	*11.0*		0.96	0.86	3.81	0.50	<0.02	0.3	0.39	1.60		0.36	<0.02	<0.02	<0.02	<0.02
	05 May 2022	0445_MW052_220505	Normal	EM2208381	*9.31*	**0.63**	*14.4*		1.31	1.20	5.08	0.32	<0.02	0.3	0.50	2.14		0.61	<0.02	<0.02	<0.02	<0.02
	14 Oct 2022	0445_MW052_221014	Normal	EM2220286	*10.4*	0.46	*13.7*		0.60	0.57	3.30	0.32	<0.02	0.2	0.20	1.04		0.28	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW052_230505	Normal	EM2308015	*10.7*	**0.81**	*19.5*		1.80	1.93	8.79	0.47	0.04	0.4	0.54	2.92		0.72	<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_MW052_20231025	Normal	EM2319356	*31.2*	*10.6*	*174*		15.1	19.5	143	6.87	0.03	2.0	4.00	23.4		5.31	0.02	<0.02	<0.02	<0.02
	27 Nov 2023	0445_MW052_231127	Normal	EM2321318	*8.59*	**0.78**	*16.1*		1.37	1.44	7.54	0.50	<0.02	0.3	0.42	2.12		0.54	<0.02	<0.02	<0.02	<0.02
	28 Nov 2023	0445_MW052_231128	Normal	EM2321318	*10.4*	**0.92**	*19.9*		1.51	1.72	9.49	0.68	<0.02	0.3	0.44	2.33		0.61	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW052_240404	Normal	EM2405446	*6.04*	**0.88**	*20.1*		2.76	3.13	14.1	0.40	<0.02	0.5	0.79	4.29		0.82	<0.02	<0.02	<0.02	<0.02
MW056	29 Nov 2017	0445S_BH111_P_171129	Normal	ES1730510	*0.97*	0.31	**1.71**		0.14	0.22	0.74	0.15	<0.02	<0.1	<0.02	0.23		0.11	<0.02	<0.02	<0.02	<0.02
	11 Nov 2021	0445_MW056_211111	Normal	EM2122518	*0.70*	0.15	**1.50**		0.18	0.19	0.80	0.07	<0.02	<0.1	0.02	0.14		0.07	<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_MW056_221012	Normal	EM2220286	*0.66*	0.08	**1.08**		0.09	0.10	0.42	0.03	<0.02	<0.1	<0.02	0.07		0.03	<0.02	<0.02	<0.02	<0.02
		0445_QC105_20221012	Field_D	EM2220286	*0.30*	0.04	**0.53**		0.05	0.05	0.23	<0.02	<0.02	<0.1	<0.02	0.03		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC205_221012	Interlab_D	932350	*0.84*	0.10	**1.41**	<0.01	0.12	0.12	0.57	0.04	<0.01	<0.05	0.02	0.09	0.01	0.04	<0.01	<0.01	<0.01	<0.01
	25 Oct 2023	0445_MW056_20231025	Normal	EM2319356	*0.01*	<0.01	0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW056_240404	Normal	EM2405446	*0.53*	0.10	**1.23**		0.13	0.16	0.70	0.04	<0.02	<0.1	0.03	0.14		0.06	<0.02	<0.02	<0.02	<0.02
		0445_QC109_240404	Field_D	EM2405446	*0.53*	0.10	**1.25**		0.14	0.16	0.72	0.03	<0.02	<0.1	0.03	0.14		0.06	<0.02	<0.02	<0.02	<0.02
		0445_QC209_240404	Interlab_D	1086312	*0.59*	0.12	**1.14**		0.15	0.14	0.55	0.03	<0.01	<0.05	0.03	0.13	0.02	0.06	<0.01	<0.01	<0.01	<0.01
MW303	09 Dec 2017	0445_MW303_S_171209	Normal	ES1731468	*0.0028*	<0.0005	0.0037		<0.0005	<0.0005	0.0009	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	31 May 2024	0445_MW303_240531	Normal	EM2409333	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MW304	06 Dec 2017	0445s_MW304_S_171206	Normal	ES1731108	*0.02*	<0.01	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	10 Nov 2021	0445_MW304_211110	Normal	EM2122518	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 May 2022	0445_MW304_220504	Normal	EM2208381	*0.06*	<0.02	**0.15**		<0.02	<0.02	0.09	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC107_220504	Field_D	EM2208381	*0.07*	<0.02	**0.12**		<0.02	<0.02	0.05	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC207_220504	Interlab_D	886780	*0.10*	<0.01	**0.16**	<0.01	<0.01	<0.01	0.06	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10 Oct 2022	0445_MW304_221010	Normal	EM2220286	*0.30*	0.03	**0.62**		0.05	0.03	0.32	0.06	<0.02	<0.1	<0.02	0.05		<0.02	<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_MW304_230504	Normal	EM2308015	*0.14*	<0.02	**0.34**		0.03	<0.02	0.20	<0.02	<0.02	<0.1	<0.02	0.04		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC105_230504	Field_D	EM2308015	*0.10*	<0.02	**0.24**		0.02	<0.02	0.14	<0.02	<0.02	<0.1	<0.02	0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC205_230504	Interlab_D	987797	*0.15*	0.02	**0.32**		0.02	0.02	0.17	0.02	<0.01	<0.05	0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	26 Oct 2023	0445_MW304_20231026	Normal	EM2319356	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW304_240404	Normal	EM2405446	*0.19*	0.03	**0.51**		0.03	0.04	0.32	0.04	<0.02	<0.1	0.03	0.08		<0.02	<0.02	<0.02	<0.02	<0.02
MW305	06 Dec 2017	0445s_MW305_S_171206	Normal	ES1731108	*0.02*	<0.01	0.02		0.05	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	31 May 2024	0445_MW305_240531	Normal	EM2409333	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MW307	06 Dec 2017	0445s_MW307_S_171206	Normal	ES1731108	*0.25*	0.01	**0.37**		0.02	<0.02	0.12	<0.02	<0.02	<0.1	<0.02	0.05		<0.02	<0.02	<0.02	<0.02	<0.02
		0445s_QC110_171206	Field_D	ES1731108	*0.25*	0.01	**0.35**		<0.02	<0.02	0.10	<0.02	<0.02	<0.1	<0.02	0.05		<0.02	<0.02	<0.02	<0.02	<0.02
	11 Nov 2021	0445_MW307_211110	Normal	EM2122518	*70.4*	*34.2*	*422*		87.7	61.2	352	28.4	<0.04	7.1	57.5	140		23.0	0.48	<0.04	<0.04	<0.04
	22 Dec 2021	0445_MW307_211222	Normal	EM2125903	*94.3*	*44.2*	*590*		107	97.6	496	41.2	<0.05	13.4	71.3	170		31.5	0.60	<0.05	<0.05	<0.05
		0445_QC101_211222	Field_D	EM2125903	*91.0*	*44.8*	*577*		110	85.9	486	38.6	<0.05	12.4	71.0	168		32.1	0.60	<0.05	<0.05	<0.05
		0445_QC201_211222	Interlab_D	852797	*66*	**8.9**	*456*	<0.01	68	74	390	27	<0.01	4.5	16	39	45	9.5	0.15	<0.01	<0.01	<0.01
	04 May 2022	0445_MW307_220504	Normal	EM2208381	*88.8*	*49.4*	*644*		119	115	555	55.6	<0.04	16.1	72.7	221		35.5	0.62	<0.04	<0.04	<0.04
	10 Oct 2022	0445_MW307_221010	Normal	EM2220286	*13.7*	**4.88**	*72.0*		10.9	10.6	58.3	5.98	<0.02	0.9	7.32	17.3		3.06	0.07	<0.02	<0.02	<0.02
	04 May 2023	0445_MW307_230504	Normal	EM2308015	*84.1*	*35.9*	*454*		76.5	63.1	370	36.3	<0.04	10.0	50.2	122		22.3	0.50	<0.04	<0.04	<0.04
	26 Oct 2023	0445_MW307_20231026	Normal	EM2319356	*101*	*42.2*	*580*		91.3	85.6	479	40.4	<0.04	9.7	60.6	143		28.1	0.66	<0.04	<0.04	<0.04
	04 Apr 2024	0445_MW307_240404	Normal	EM2405446	*29.1*	*11.7*	*172*		22.5	21.9	143	9.86	<0.02	5.2	19.4	45.2		7.48	0.19	<0.02	<0.02	<0.02
MW311	05 Dec 2017	0445S_MW311_S_171205	Normal	ES1731167	*0.02*	<0.01	**0.09**		<0.02	<0.02	0.07	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445S_QC108_171205	Field_D	ES1731167	*0.02*	<0.01	**0.09**		<0.02	<0.02	0.07	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	17 Nov 2021	0445_MW311_211117	Normal	EM2122998	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	10 Oct 2022	0445_MW311_221010	Normal	EM2220286	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	27 Oct 2023	0445_MW311_20231026	Normal	EM2319356	*0.02*	<0.01	0.04		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
MW312	06 Dec 2017	0445s_MW312_S_171206	Normal	ES1731108	<0.01	<0.01	**0.12**		0.02	0.02	0.12	<0.02	<0.02	<0.1	<0.02	0.03		<0.02	<0.02	<0.02	<0.02	<0.02
	10 Nov 2021	0445_MW312_21110	Normal	EM2122518	*0.02*	<0.01	**0.16**		<0.02	0.02	0.14	<0.02	<0.02	<0.1	<0.02	0.04		<0.02	<0.02	<0.02	<0.02	<0.02
	04 May 2022	0445_MW312_220504	Normal	EM2208381	<0.01	<0.01	**0.10**		<0.02	<0.02	0.10	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	10 Oct 2022	0445_MW312_221010	Normal	EM2220286	*0.04*	<0.01	**0.15**		<0.02	<0.02	0.11	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_MW312_230504	Normal	EM2308015	*0.12*	0.01	**0.36**		0.02	0.04	0.24	0.02	<0.02	<0.1	<0.02	0.04		<0.02	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW312_20231026	Normal	EM2319356	*0.13*	0.01	**0.37**		0.03	0.03	0.24	<0.02	<0.02	<0.1	<0.02	0.04		<0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW312_240404	Normal	EM2405446	*0.12*	0.02	**0.37**		0.02	0.03	0.25	0.02	<0.02	<0.1	<0.02	0.05		<0.02	<0.02	<0.02	<0.02	<0.02
MW313	09 Dec 2017	0445_MW313_D_171209	Normal	ES1731468	*0.0039*	<0.0005	0.0052		<0.0005	<0.0005	0.0013	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	11 Nov 2021	0445_MW313_211111	Normal	EM2122519	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	15 Oct 2022	0445_MW313_221015	Normal	EM2220271	*0.01*	<0.01	0.02		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	27 Oct 2023	0445_MW313_20231027	Normal	EM2319354	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02

																					Perfluorocarbons	
					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**															
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*															
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220																
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*																
Location Code	Date	Field ID	Sample Type	Lab Report Number																		
MW315	06 Dec 2017	0445s_MW315_D_171206	Normal	ES1731108	<0.01	<0.01	<0.01		<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	17 Nov 2021	0445_MW315_211117	Normal	EM2122998	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
MW317	06 Dec 2017	0445s_MW317_D_171206	Normal	ES1731108	*0.05*	<0.01	0.05		<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
MW319	04 Dec 2017	0445S_MW319_D_171204	Normal	ES1731167	*0.22*	<0.01	**0.31**		0.03	<0.02	0.09	<0.02	<0.02	<0.1	<0.02	0.04		<0.02	<0.02	<0.02	<0.02	<0.02
	10 Nov 2021	0445_MW319_211110	Normal	EM2122518	*0.28*	<0.01	**0.37**		<0.02	<0.02	0.09	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		QC201_211110	Interlab_D	841785	*0.39*	<0.01	**0.51**	<0.01	0.01	<0.01	0.12	<0.01	<0.01	<0.05	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		0445_QC101_211110	Field_D	EM2122518	*0.31*	<0.01	**0.39**		<0.02	<0.02	0.08	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_MW319_221012	Normal	EM2220286	*0.20*	<0.01	**0.26**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC203_221012	Interlab_D	932350	*0.22*	<0.01	**0.28**	<0.01	<0.01	<0.01	0.06	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	25 Oct 2023	0445_MW319_20231025	Normal	EM2319356	*0.18*	<0.01	**0.22**		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC106_20231025	Field_D	EM2319356	*0.17*	<0.01	**0.21**		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC206_20231025	Interlab_D	1039507	*0.14*	<0.01	**0.17**		<0.01	<0.01	0.03	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MW321	05 Dec 2017	0445S_MW321_S_171205	Normal	ES1731167	*6.01*	0.10	*7.65*		0.05	0.06	1.64	0.38	<0.02	<0.1	0.02	0.16		0.03	<0.02	<0.02	<0.02	<0.02
	10 Nov 2021	0445_MW321_211110	Normal	EM2122518	*0.73*	<0.01	**0.92**		<0.02	<0.02	0.19	0.04	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_MW321_221210	Normal	EM2220286	*0.58*	<0.01	**0.75**		<0.02	<0.02	0.17	0.03	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC102_20221012	Field_D	EM2220286	*0.55*	<0.01	**0.70**		<0.02	<0.02	0.15	0.03	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC202_221012	Interlab_D	932350	*0.07*	<0.01	**0.09**	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	25 Oct 2023	0445_MW321_20231025	Normal	EM2319356	*983*	*11.6*	*1,180*		3.40	6.08	195	59.5	<0.04	0.2	1.66	11.2		2.18	1.96	<0.04	<0.04	<0.04
	27 Nov 2023	0445_MW321_231127	Normal	EM2321318	*491*	**9.16**	*608*		2.38	3.91	117	31.4	<0.02	0.3	0.96	6.08		1.42	1.27	<0.02	<0.02	<0.02
	28 Nov 2023	0445_MW321_231128	Normal	EM2321318	*820*	*11.2*	*984*		3.89	8.84	164	40.6	<0.02	0.4	1.62	11.0		2.14	2.24	0.04	<0.02	<0.02
		0445_QC101_231128	Field_D	EM2321318	*455*	**7.68**	*570*		2.28	5.21	115	31.7	<0.02	0.3	0.93	5.78		1.32	1.09	<0.02	<0.02	<0.02
		0445_QC201_231128	Interlab_D	1049115	*480*	**5.8**	*579*		1.8	2.6	99	20	<1	0.28	0.86	5.0	0.92	1.2	<1	<1	<0.01	<0.01
MW323	30 Nov 2017	0445S_MW323_S_171130	Normal	ES1730642	*0.02*	<0.01	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445S_QC104_S_171130	Field_D	ES1730642	<0.01	<0.01	<0.01		<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445S_QC204_171130	Interlab_D	575864	*0.02*	<0.01	0.02		<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01
	10 Nov 2021	0445_MW323_211110	Normal	EM2122518	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_MW323_221210	Normal	EM2220286	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_MW323_20231025	Normal	EM2319356	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
MW326	04 Dec 2017	0445S_MW326_S_171204	Normal	ES1731167	*0.03*	<0.01	0.03		<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	10 Nov 2021	0445_MW326_211110	Normal	EM2122518	*0.03*	<0.01	**0.29**		0.46	0.11	0.26	<0.02	<0.02	<0.1	0.05	0.10		<0.02	<0.02	<0.02	<0.02	<0.02
MW329	04 Dec 2017	0445S_MW329_S_171204	Normal	ES1731167	*0.02*	<0.01	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	10 Nov 2021	0445_MW329_21110	Normal	EM2122518	*0.03*	<0.01	**0.17**		0.04	0.03	0.14	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC102_211110	Field_D	EM2122518	*0.03*	<0.01	**0.17**		0.04	0.03	0.14	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		QC202_211110	Interlab_D	841785	*0.03*	<0.01	**0.19**	<0.01	0.04	0.03	0.16	<0.01	<0.01	<0.05	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
	12 Oct 2022	0445_MW329_221012	Normal	EM2220286	*0.03*	<0.01	**0.37**		0.20	0.10	0.34	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_MW329_20231025	Normal	EM2319356	*0.06*	<0.01	**0.42**		0.14	0.09	0.36	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
MW342	07 Dec 2017	0445N_MW342_S_171207	Normal	ES1731478	<0.01	<0.01	**0.09**		0.03	0.04	0.09	<0.02	<0.02	<0.1	<0.02	0.04		<0.02	<0.02	<0.02	<0.02	<0.02
	11 Nov 2021	0445_MW342_211111	Normal	EM2122518	*9.21*	0.22	*13.5*		0.88	0.53	4.31	0.36	<0.02	<0.1	0.24	0.95		0.08	<0.02	<0.02	<0.02	<0.02
	22 Dec 2021	0445_MW342_211222	Normal	EM2125903	*4.15*	0.20	*9.15*		0.94	0.78	5.00	0.36	<0.02	0.1	0.24	1.10		0.08	<0.02	<0.02	<0.02	<0.02
		0445_QC100_211222	Field_D	EM2125903	*4.37*	0.21	*9.48*		0.89	0.70	5.11	0.37	<0.02	0.1	0.24	1.13		0.07	<0.02	<0.02	<0.02	<0.02
		0445_QC200_211222	Interlab_D	852797	*5.8*	0.32	*12.6*	<0.01	1.1	1.0	6.8	0.41	<0.01	0.20	0.30	1.4	0.46	0.09	<0.01	<0.01	<0.01	<0.01
	06 May 2022	0445_MW342_220506	Normal	EM2208381	*4.00*	0.16	*8.59*		0.68	0.51	4.59	0.26	<0.02	<0.1	0.22	0.81		0.07	<0.02	<0.02	<0.02	<0.02
		0445_QC111_220506	Field_D	EM2208381	*3.97*	0.17	*8.58*		0.74	0.53	4.61	0.26	<0.02	<0.1	0.22	0.75		0.08	<0.02	<0.02	<0.02	<0.02
		0445_QC211_220506	Interlab_D	886780	*4.9*	0.21	*11.3*	<0.01	0.91	0.75	6.4	0.28	<0.01	0.14	0.19	0.88	0.54	0.07	<0.01	<0.01	<0.01	<0.01
	15 Oct 2022	0445_MW342_221015	Normal	EM2220286	*3.04*	0.11	*5.93*		0.46	0.39	2.89	0.14	<0.02	<0.1	0.12	0.58		0.04	<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_MW342_230504	Normal	EM2308015	*2.56*	0.08	*4.81*		0.35	0.37	2.25	0.11	<0.02	<0.1	0.09	0.39		0.03	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW342_20231026	Normal	EM2319356	*3.37*	0.09	*5.65*		0.30	0.30	2.28	0.11	<0.02	<0.1	0.08	0.36		0.03	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW342_240404	Normal	EM2405446	*3.04*	0.08	*5.21*		0.32	0.28	2.17	0.11	<0.02	<0.1	0.10	0.42		0.03	<0.02	<0.02	<0.02	<0.02
MW345	07 Dec 2017	0445N_MW345_S_171207	Normal	ES1731478	*0.10*	<0.01	**0.30**		<0.02	0.03	0.20	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	17 Nov 2021	0445_MW345_211117	Normal	EM2122998	*0.02*	<0.01	**0.25**		0.06	0.05	0.23	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_MW345_220506	Normal	EM2208381	*0.03*	<0.01	**0.24**		0.04	0.03	0.21	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_MW345_221014	Normal	EM2220286	*0.08*	<0.01	**0.32**		0.05	0.04	0.24	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW345_230505	Normal	EM2308015	*0.09*	<0.02	**0.32**		0.05	0.04	0.23	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW345_20231026	Normal	EM2319356	*0.10*	<0.01	**0.34**		0.06	0.04	0.24	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW345_240404	Normal	EM2405446	*0.04*	<0.01	**0.18**		0.02	0.02	0.14	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
MW346	07 Dec 2017	0445N_MW346_S_171207	Normal	ES1731478	<0.01	<0.01	<0.01		<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445N_QC212_171207	Normal	577514	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01
		0445N_QC112_171207	Field_D	ES1731478	<0.01	<0.01	<0.01		<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	16 Nov 2021	0445_MW346_211117	Normal	EM2122998	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_MW346_220506	Normal	EM2208381	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_MW346_221012	Normal	EM2220286	*0.10*	<0.01	**0.17**		<0.02	<0.02	0.07	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_MW346_230504	Normal	EM2308015	*0.02*	<0.01	0.04		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW346_20231026	Normal	EM2319356	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW346_240404	Normal	EM2405446	*0.01*	<0.01	0.03		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02

																						Perfluorocarbons	
					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**															
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*															
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220																
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*																
Location Code	Date	Field ID	Sample Type	Lab Report Number																		
MW350_D	10 Dec 2017	0445E_MW350_D_171210	Normal	ES1731478	*0.27*	0.02	**0.63**		<0.02	0.06	0.36	0.02	<0.02	<0.1	<0.02	0.06		<0.02	<0.02	<0.02	<0.02	<0.02
	11 Nov 2021	0445_MW350_D_211111	Normal	EM2122518	*0.33*	0.02	**0.60**		0.04	0.03	0.27	0.02	<0.02	<0.1	<0.02	0.06		<0.02	<0.02	<0.02	<0.02	<0.02
	03 May 2022	0445_MW350_D_220503	Normal	EM2208381	*0.28*	0.02	**0.53**		0.10	0.04	0.25	0.02	<0.02	<0.1	<0.02	0.04		<0.02	<0.02	<0.02	<0.02	<0.02
	14 Oct 2022	0445_MW350_D_221014	Normal	EM2220286	*0.32*	0.02	**0.62**		0.10	0.04	0.30	0.02	<0.02	<0.1	<0.02	0.06		<0.02	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW350__D_230505	Normal	EM2308015	*0.44*	0.02	**0.73**		0.04	0.04	0.29	0.03	<0.02	<0.1	<0.02	0.07		<0.02	<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_MW350_D_20231025	Normal	EM2319356	*0.43*	0.02	**0.73**		0.07	0.03	0.30	0.02	<0.02	<0.1	<0.02	0.06		<0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW350_D_240404	Normal	EM2405446	*0.38*	0.02	**0.64**		0.04	0.03	0.26	0.02	<0.02	<0.1	<0.02	0.06		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC105_240404	Field_D	EM2405446	*0.36*	0.02	**0.63**		0.06	0.03	0.27	<0.02	<0.02	<0.1	<0.02	0.05		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC205_240404	Interlab_D	1086312	*0.35*	0.02	**0.55**		0.03	0.03	0.20	0.02	<0.01	<0.05	0.01	0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MW350_S	10 Dec 2017	0445E_MW350_S_171210	Normal	ES1731478	*15.2*	**4.24**	*90.2*		7.42	10.4	75.0	2.02	<0.02	1.9	4.72	14.0		1.87	<0.02	<0.02	<0.02	<0.02
	11 Nov 2021	0445_MW350_S_211111	Normal	EM2122518	*15.3*	**3.05**	*48.7*		3.62	2.60	33.4	2.86	<0.04	0.6	1.39	5.72		1.16	<0.04	<0.04	<0.04	<0.04
		0445_QC105_211111	Field_D	EM2122518	*15.2*	**3.06**	*48.9*		3.65	2.70	33.7	2.91	<0.04	0.9	1.45	5.86		1.24	<0.04	<0.04	<0.04	<0.04
		QC205_211111	Interlab_D	841785	*19*	**2.8**	*69*	<0.01	4.0	5.0	50	2.8	<0.01	0.95	1.3	7.0	1.4	1.1	<0.01	<0.01	<0.01	<0.01
	06 May 2022	0445_MW350_S_220506	Normal	EM2208381	*17.8*	**2.67**	*43.4*		2.43	2.69	25.6	2.32	<0.02	0.8	1.71	4.45		1.33	0.02	<0.02	<0.02	<0.02
	14 Oct 2022	0445_MW350_S_221014	Normal	EM2220286	*19.3*	**1.74**	*37.2*		1.37	1.89	17.9	1.93	<0.02	0.4	0.99	3.51		0.62	0.03	<0.02	<0.02	<0.02
	05 May 2023	0445_MW350_S_230505	Normal	EM2308015	*45.5*	**5.20**	*98.8*		2.80	4.12	53.3	4.94	<0.02	0.9	2.53	8.28		1.55	0.05	<0.02	<0.02	<0.02
	25 Oct 2023	0445_MW350_S_20231025	Normal	EM2319356	*69.1*	**5.64**	*140*		2.64	4.52	71.4	5.47	<0.02	1.0	2.58	9.98		1.54	0.06	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW350_S_240404	Normal	EM2405446	*40.7*	**4.86**	*114*		3.30	5.30	73.2	2.98	<0.02	1.3	3.25	11.5		1.72	0.05	<0.02	<0.02	<0.02
MW351	11 Dec 2017	0445E_MW351_S_171211	Normal	ES1731478	*0.03*	<0.01	0.07		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	16 Nov 2021	0445_MW351_211116	Normal	EM2122998	*0.01*	<0.01	0.02		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	03 May 2022	0445_MW351_220503	Normal	EM2208381	*0.01*	<0.01	0.02		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC100_220503	Field_D	EM2208381	*0.01*	<0.01	0.02		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC200_220503	Interlab_D	886780	*0.01*	<0.01	0.02	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	13 Oct 2022	0445_MW351_221013	Normal	EM2220286	*0.02*	<0.01	0.04		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW351_230505	Normal	EM2308015	*0.03*	<0.01	0.05		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC107_230505	Field_D	EM2308015	*0.02*	<0.01	0.04		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC207_230505	Interlab_D	987797	*0.02*	<0.01	0.04		<0.01	<0.01	0.02	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	25 Oct 2023	0445_MW351_20231025	Normal	EM2319356	*0.02*	<0.01	0.04		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW351_240404	Normal	EM2405446	*0.06*	<0.01	**0.10**		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
MW352	11 Dec 2017	0445E_MW352_S_171211	Normal	ES1731478	*0.02*	<0.01	**0.10**		<0.02	<0.02	0.08	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	16 Nov 2021	0445_MW352_211116	Normal	EM2122998	*0.01*	<0.01	0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	03 May 2022	0445_MW352_220503	Normal	EM2208381	*0.01*	<0.01	0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_MW352_221013	Normal	EM2220286	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW352_230505	Normal	EM2308015	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_MW352_20231025	Normal	EM2319356	*0.01*	<0.01	0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW352_240404	Normal	EM2405446	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
MW353	11 Dec 2017	0445E_MW353_S_171211	Normal	ES1731478	*3.14*	0.32	*8.98*		0.70	0.76	5.84	0.27	<0.02	<0.1	0.26	0.86		0.14	<0.02	<0.02	<0.02	<0.02
	12 Nov 2021	0445_MW353_211111	Normal	EM2122518	*3.85*	0.22	*7.05*		0.46	0.43	3.20	0.26	<0.02	<0.1	0.13	0.53		0.11	<0.02	<0.02	<0.02	<0.02
	05 May 2022	0445_MW353_220505	Normal	EM2208381	*3.10*	0.18	*5.93*		0.40	0.40	2.83	0.21	<0.02	<0.1	0.11	0.37		0.09	<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_MW353_221013	Normal	EM2220286	*2.54*	0.14	*4.94*		0.30	0.34	2.40	0.16	<0.02	<0.1	0.06	0.35		0.06	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW353_230505	Normal	EM2308015	*3.28*	0.33	*10.1*		1.34	1.50	6.78	0.35	<0.02	0.2	0.34	1.56		0.25	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW353_20231026	Normal	EM2319356	*4.60*	**0.67**	*18.8*		2.97	2.43	14.2	0.81	<0.02	0.2	0.89	2.42		0.56	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW353_240404	Normal	EM2405446	*0.29*	0.23	*4.93*		1.61	1.10	4.64	0.10	<0.02	0.3	0.47	1.85		0.26	<0.02	<0.02	<0.02	<0.02
MW354	11 Dec 2017	0445E_MW354_S_171211	Normal	ES1731478	*0.03*	<0.01	**0.17**		<0.02	0.02	0.14	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445E_QC116_171211	Field_D	ES1731478	*0.10*	0.01	**0.27**		0.03	0.04	0.17	<0.02	<0.02	<0.1	<0.02	0.03		<0.02	<0.02	<0.02	<0.02	<0.02
	16 Nov 2021	0445_MW354_211116	Normal	EM2122998	*0.15*	0.01	**0.38**		0.04	0.03	0.23	<0.02	<0.02	<0.1	<0.02	0.04		<0.02	<0.02	<0.02	<0.02	<0.02
	05 May 2022	0445_MW354_220505	Normal	EM2208381	*0.11*	<0.01	**0.21**		0.03	<0.02	0.10	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_MW354_221013	Normal	EM2220286	*0.08*	<0.01	**0.15**		<0.02	<0.02	0.07	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW354_230505	Normal	EM2308015	*0.08*	<0.01	**0.14**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW354_20231026	Normal	EM2319356	*0.05*	<0.01	**0.08**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC109_20231026	Field_D	EM2319356	*0.05*	<0.01	**0.09**		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC209_20231026	Interlab_D	1039507	*0.04*	<0.01	0.06		<0.01	<0.01	0.02	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	04 Apr 2024	0445_MW354_240404	Normal	EM2405446	*0.03*	<0.01	0.05		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC107_240404	Field_D	EM2405446	*0.05*	<0.01	**0.08**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC207_240404	Interlab_D	1086312	*0.03*	<0.01	0.05		<0.01	<0.01	0.02	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MW356	09 Dec 2017	0445_MW356_S_171209	Normal	ES1731468	*0.0009*	<0.0005	0.0019		<0.0005	<0.0005	0.0010	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	12 Nov 2021	0445_MW356_211112	Normal	EM2122519	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	07 May 2022	0445_MW356_220505	Normal	EM2208383	<0.01	<0.01	0.02		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_MW356_230505	Normal	EM2308009	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_MW356_20231025	Normal	EM2319354	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	05 Apr 2024	0445_MW356_240405	Normal	EM2405435	<0.01	<0.01	0.01		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02

					Perfluorocarbons																
					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**															
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*															
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220																
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*																
Location Code	Date	Field ID	Sample Type	Lab Report Number																		
MW357	09 Dec 2017	0445_MW357_S_171209	Normal	ES1731468	*0.0262*	0.0011	**0.111**		0.0082	0.0089	0.0844	0.0018	<0.0005	<0.002	0.0010	0.0040		0.0007	<0.0005	<0.0005	<0.0005	<0.0005
		0445_QC114_171209	Field_D	ES1731468	*0.0254*	0.0011	**0.104**		0.0064	0.0097	0.0788	0.0018	<0.0005	<0.002	0.0006	0.0025		0.0008	<0.0005	<0.0005	<0.0005	<0.0005
	12 Nov 2021	0445_MW357_211112	Normal	EM2122519	*0.03*	<0.01	0.07		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_MW357_220506	Normal	EM2208383	*0.01*	<0.01	0.04		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_MW357_221012	Normal	EM2220271	*0.02*	<0.01	0.06		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_MW357_230504	Normal	EM2308009	*0.04*	<0.01	**0.08**		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	24 Oct 2023	0445_MW357_20231024	Normal	EM2319354	*0.02*	<0.01	0.05		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW357_240404	Normal	EM2405435	*0.02*	<0.01	0.04		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
MW359	05 Dec 2017	0445S_MW359_D_171205	Normal	ES1731167	*0.03*	<0.01	0.03		<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	28 Nov 2023	0445_MW359_231128	Normal	EM2321318	*0.11*	<0.01	**0.26**		<0.02	<0.02	0.15	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
MW360	09 Dec 2017	0445_MW360_S_171209	Normal	ES1731468	*0.0836*	0.0009	**0.232**		0.0087	0.0173	0.148	0.0048	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	11 Nov 2021	0445_MW360_211111	Normal	EM2122519	*0.06*	<0.01	**0.15**		<0.02	<0.02	0.09	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_MW360_220506	Normal	EM2208383	*0.05*	<0.01	**0.11**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	15 Oct 2022	0445_MW360_221015	Normal	EM2220271	*0.08*	<0.01	**0.17**		<0.02	<0.02	0.09	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_MW360_230504	Normal	EM2308009	*0.08*	<0.01	**0.14**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_MW360_20231025	Normal	EM2319354	*0.07*	<0.01	**0.12**		<0.02	<0.02	0.05	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW360_240404	Normal	EM2405435	*0.04*	<0.01	0.07		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
MW361	09 Dec 2017	0445_MW361_S_171209	Normal	ES1731468	*0.0488*	0.0098	**0.296**		0.0110	0.0166	0.247	0.0053	<0.0005	<0.002	0.0155	0.0199		0.0096	<0.0005	<0.0005	<0.0005	<0.0005
		0445_QC115_171209	Field_D	ES1731468	*0.0454*	0.0099	**0.282**		0.0094	0.0141	0.237	0.0050	<0.0005	<0.002	0.0072	0.0206		0.0093	<0.0005	<0.0005	<0.0005	<0.0005
	11 Nov 2021	0445_MW361_211111	Normal	EM2122519	*0.08*	0.01	**0.21**		<0.02	<0.02	0.13	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	07 May 2022	0445_MW361_220506	Normal	EM2208381	*0.07*	0.01	**0.21**		0.02	<0.02	0.14	<0.02	<0.02	<0.10	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	15 Oct 2022	0445_MW361_221015	Normal	EM2220271	*0.08*	<0.01	**0.11**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_MW361_230504	Normal	EM2308009	*0.10*	<0.01	**0.14**		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_MW361_20231025	Normal	EM2319354	*0.10*	0.02	**0.17**		<0.02	<0.02	0.07	<0.02	<0.02	<0.1	<0.02	0.03		<0.02	<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW361_240404	Normal	EM2405435	*0.10*	0.03	**0.30**		<0.02	0.02	0.20	<0.02	<0.02	<0.1	0.04	0.05		0.02	<0.02	<0.02	<0.02	<0.02
MW403	10 Dec 2017	0445E_BH01_S_171210	Normal	ES1731478	*39.4*	**3.38**	*96.2*		8.93	9.20	56.8	2.65	<0.02	2.2	4.94	14.7		1.87	0.06	<0.02	<0.02	<0.02
	12 Nov 2021	0445_MW403_211111	Normal	EM2122518	*52.3*	**4.41**	*93.9*		5.04	5.46	41.6	3.48	<0.04	1.1	2.23	9.86		1.69	0.05	<0.04	<0.04	<0.04
	05 May 2022	0445_MW403_220505	Normal	EM2208381	*52.7*	**3.42**	*98.7*		5.98	7.17	46.0	4.26	<0.04	1.3	2.40	11.2		1.66	0.06	<0.04	<0.04	<0.04
	14 Oct 2022	0445_MW403_221014	Normal	EM2220286	*58.1*	**2.85**	*87.3*		4.15	3.95	29.2	2.90	<0.03	0.8	1.59	7.21		1.01	0.04	<0.03	<0.03	<0.03
	05 May 2023	0445_MW403_230505	Normal	EM2308015	*38.1*	**3.04**	*80.5*		6.47	7.04	42.4	2.42	<0.02	1.4	2.80	10.3		1.80	0.04	<0.02	<0.02	<0.02
	26 Oct 2023	0445_MW403_2023102	Normal	EM2319356	*40.8*	**3.55**	*103*		7.80	10.2	62.2	2.73	<0.02	1.8	3.34	14.4		2.04	0.04	<0.02	<0.02	<0.02
	05 Apr 2024	0445_MW403_240404	Normal	EM2405446	*30.5*	**2.78**	*83.7*		6.70	7.40	53.2	1.87	<0.02	1.9	3.36	14.2		1.68	0.03	<0.02	<0.02	<0.02
MW404	10 Dec 2017	0445E_BH02_S_171210	Normal	ES1731478	*65.7*	**6.80**	*118*		9.63	10.0	52.4	4.29	<0.02	1.9	5.15	12.3		3.38	0.03	<0.02	<0.02	<0.02
	11 Nov 2021	0445_MW404_211111	Normal	EM2122518	*50.2*	**3.86**	*81.1*		5.20	3.16	30.9	2.81	<0.04	0.8	1.66	7.59		1.73	<0.04	<0.04	<0.04	<0.04
		0445_QC103_211111	Field_D	EM2122518	*40.9*	**3.96**	*69.3*		5.33	2.88	28.4	2.75	<0.04	1.1	1.74	7.32		1.86	<0.04	<0.04	<0.04	<0.04
		QC203_211111	Interlab_D	841785	*47*	**3.4**	*84*	<0.1	4.7	4.6	37	1.7	<0.01	0.96	1.4	6.9	1.5	1.6	0.02	<0.01	<0.01	<0.01
	05 May 2022	0445_MW404_220505	Normal	EM2208381	*56.2*	**4.02**	*101*		7.16	9.16	45.2	4.18	<0.04	1.2	2.63	13.3		2.80	<0.04	<0.04	<0.04	<0.04
	14 Oct 2022	0445_MW404_221014	Normal	EM2220286	*82.4*	**6.44**	*156*		12.8	13.0	74.0	4.68	<0.03	1.6	4.15	19.6		4.22	0.04	<0.03	<0.03	<0.03
	05 May 2023	0445_MW404_230505	Normal	EM2308015	*96.4*	*12.2*	*198*		19.5	18.2	102	6.71	<0.03	2.6	6.13	31.2		7.04	0.05	<0.03	<0.03	<0.03
	26 Oct 2023	0445_MW404_20231025	Normal	EM2319356	*104*	*10.3*	*214*		13.9	16.8	110	6.86	<0.02	2.6	5.10	25.1		5.41	0.05	<0.02	<0.02	<0.02
	04 Apr 2024	0445_MW404_240404	Normal	EM2405446	*82.4*	**8.66**	*178*		13.0	14.7	95.9	4.97	<0.02	2.8	5.71	25.6		5.12	0.04	<0.02	<0.02	<0.02
MW411	25 May 2022	0445E_MW411_S_220525	Normal	893006	*0.69*	**0.036**	*1.36*		0.085	0.090	0.67	0.036	<0.02	0.014	0.018	0.086		0.014	<0.02	<0.02	<0.02	<0.02
	31 May 2023	0445E_MW411_S_230531	Normal	995768	*0.096*	**0.004**	*0.146*		0.012	0.010	0.050	0.004	<0.02	<0.1	0.002	0.008		0.002	<0.02	<0.02	<0.02	<0.02
	30 May 2024	0445_MW411_240530	Normal	EM2409333	*0.08*	<0.01	**0.15**		<0.02	<0.02	0.07	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC100_240530	Field_D	EM2409333	*0.08*	<0.01	**0.18**		<0.02	<0.02	0.10	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC200_240530	Interlab_D	1105323	*0.10*	<0.01	**0.18**		0.02	0.01	0.08	<0.01	<0.01	<0.05	<0.01	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
MW412	25 May 2022	0445E_MW412_S_220525	Normal	893006	*1.6*	0.17	*2.9*		0.22	0.29	1.3	0.11	ND	0.047	0.068	0.36		0.069	ND	ND	ND	ND
	31 May 2023	0445E_MW412_S_230531	Normal	995768	*1.3*	0.068	*2.04*		0.093	0.098	0.74	0.042	ND	0.019	0.027	0.14		0.026	ND	ND	ND	ND
	30 May 2024	0445_MW412_240530	Normal	EM2409333	*1.98*	0.07	*2.99*		0.13	0.11	1.01	0.07	<0.02	<0.1	0.03	0.16	0.04	0.03	<0.02	<0.02	<0.02	<0.02
MW413	25 May 2022	0445E_MW413_S_220525	Normal	893006	*1.5*	0.091	*3.5*		0.15	0.24	2.0	0.10	ND	0.033	0.068	0.31		0.031	ND	ND	ND	ND
	31 May 2023	0445E_MW413_S_230531	Normal	995768	*0.77*	0.031	**1.51**		0.049	0.081	0.74	0.031	ND	0.010	0.017	0.089		0.010	ND	ND	ND	ND
	30 May 2024	0445_MW413_240530	Normal	EM2409333	*0.43*	0.02	**0.82**		0.06	0.03	0.39	0.02	<0.02	<0.1	<0.02	0.04	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MW414	25 May 2022	0445E_MW414_S_220525	Normal	893006	*1.9*	0.080	*3.9*		0.17	0.24	2.0	0.089	ND	0.033	0.072	0.29		0.028	ND	ND	ND	ND
	31 May 2023	0445E_MW414_S_230531	Normal	995768	*1.3*	0.045	*2.14*		0.059	0.099	0.84	0.045	ND	0.013	0.018	0.095		0.017	ND	ND	ND	ND
MW415	25 May 2022	0445E_MW415_S_220525	Normal	893006	*4.9*	0.59	*11.7*		0.87	1.1	6.8	0.44	ND	0.20	0.29	1.5		0.26	0.002	ND	ND	ND
	25 May 2022	0445E_QC101_220525	Field_D	893006	*5.5*	0.58	*11.8*		0.91	1.0	6.3	0.43	ND	0.20	0.33	1.6		0.28	0.002	ND	ND	ND
	31 May 2023	0445E_MW415_S_230531	Normal	995768	*1.8*	0.10	*3.4*		0.29	0.33	1.6	0.078	ND	0.071	0.099	0.44		0.076	ND	ND	ND	ND
	30 May 2024	0445_MW415_240530	Normal	EM2409333	*3.22*	0.37	*8.37*		0.84	0.70	5.15	0.28	<0.02	0.1	0.30	1.22	0.33	0.23	<0.02	<0.02	<0.02	<0.02
MW416	06 May 2023	0445_MW416_230506	Normal	EM2308015	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_MW416_20231025	Normal	EM2319356	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC105_20231025	Field_D	EM2319356	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC205_20231024	Interlab_D	1039507	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

					Perfluorocarbons																
					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**															
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*															
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220																
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*																
Location Code	Date	Field ID	Sample Type	Lab Report Number																		
OTH019	31 Oct 2018	0445_OTH019_181031	Normal	ES1832670	*0.0370*	0.0053	**0.171**		0.0095	0.0102	0.134	0.0054	<0.0005	<0.002	<0.0005	0.0056		0.0011	<0.0005	<0.0005	<0.0005	<0.0005
		0445_QC120_181031	Field_D	ES1832670	*0.0375*	0.0058	**0.178**		0.0100	0.0105	0.141	0.0056	<0.0005	<0.002	<0.0005	0.0054		0.0011	<0.0005	<0.0005	<0.0005	<0.0005
		0445_QC220_181031	Interlab_D	625560	*0.037*	0.004	**0.157**		0.010	0.009	0.12	0.004	<0.001	<0.005	<0.001	0.005		<0.001	<0.001	<0.001	<0.001	<0.001
	15 Nov 2021	0445_OTH019_211115	Normal	EM2122969	*0.05*	<0.01	**0.18**		<0.02	<0.02	0.13	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	05 May 2022	0445_OTH019_220505	Normal	EM2208348	*0.04*	<0.01	**0.15**		<0.02	<0.02	0.11	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	10 Nov 2022	0445_OTH019_221110	Normal	EM2222364	*0.03*	<0.01	**0.13**		<0.02	<0.02	0.10	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC110_221110	Field_D	EM2222364	*0.03*	<0.01	**0.13**		<0.02	<0.02	0.10	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
		0445_QC210_221110	Interlab_D	941104	*0.05*	<0.01	**0.15**	<0.01	<0.01	<0.01	0.10	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	02 May 2023	0445_OTH019_230502	Normal	EM2308003	*0.05*	<0.01	**0.16**		<0.02	<0.02	0.11	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	23 Oct 2023	0445_OTH019_20231023	Normal	EM2319355	*0.06*	<0.01	**0.22**		<0.02	<0.02	0.16	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
	03 Apr 2024	0445_OTH019_240403	Normal	EM2405436	*0.04*	<0.01	**0.17**		<0.02	<0.02	0.13	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02

Notes

Denotes first time detection above LOR in latest monitoring round

Denotes new exceedance of lowest adopted screening criteria in latest monitoring round

					Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																				
PFAS NEMP 2.0 Table 1 Health Recreational Water																				
PFAS NEMP 2.0 Table 5 Freshwater 95%																				
PFAS NEMP 2.0 Table 5 Freshwater 99%																				
Location Code	Date	Field ID	Sample Type	Lab Report Number																
MW009	28 Nov 2017	0445E_MW09_S_171128	Normal	ES1730397	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	16.2		
	16 Nov 2021	0445_MW009_211116	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	11.6		
	05 May 2022	0445_MW009_220505	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.08	<0.05	<0.05	14.9		
	13 Oct 2022	0445_MW009_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.09	<0.05	<0.05	12.6		
	05 May 2023	0445_MW009_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.10	<0.05	<0.05	10.1		
	26 Oct 2023	0445_MW009_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.28	<0.05	<0.05	28.7		
		0445_QC107_20231026	Field_D	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.25	<0.05	<0.05	24.6		
		0445_QC207_20231026	Interlab_D	1039507	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	0.21	<0.01	<0.01	24.36	10.11	17.91
	04 Apr 2024	0445_MW009_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.16	<0.05	<0.05	22.7		
MW012	28 Nov 2017	0445E_MW12_S_171128	Normal	ES1730397	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.30		
		0445E_QC100_171128	Field_D	ES1730397	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.37		
	12 Nov 2021	0445_MW012_211111	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.43		
	05 May 2022	0445_MW012_220505	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.62		
	13 Oct 2022	0445_MW012_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.21		
	05 May 2023	0445_MW012_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.31		
	26 Oct 2023	0445_MW012_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.41		
	04 Apr 2024	0445_MW012_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.32		
MW016	28 Nov 2017	0445E_MW16_S_171128	Normal	ES1730397	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	15.0		
	16 Nov 2021	0445_MW016_211116	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	9.77		
	09 May 2022	0445_MW016_220509	Normal	EM2208649	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	11.8		
	13 Oct 2022	0445_MW016_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	10.0		
	05 May 2023	0445_MW016_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	5.16		
	26 Oct 2023	0445_MW016_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	13.6		
	04 Apr 2024	0445_MW016_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	10.2		
MW018	28 Nov 2017	0445E_MW18_S_171128	Normal	ES1730397	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.33		
	16 Nov 2021	0445_MW018_211116	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.78		
	05 May 2022	0445_MW018_220505	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.77		
	13 Oct 2022	0445_MW018_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.18		
	05 May 2023	0445_MW018_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.76		
	26 Oct 2023	0445_MW018_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.95		
	04 Apr 2024	0445_MW018_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.14		
MW020	28 Nov 2017	0445E_MW20_S_171128	Normal	ES1730397	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.91		
	16 Nov 2021	0445_MW020_211116	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	4.16		
	03 May 2022	0445_MW020_220503	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.42		
	13 Oct 2022	0445_MW020_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.91		
	06 May 2023	0445_MW020_230506	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.47		
	26 Oct 2023	0445_MW020_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.38		
	04 Apr 2024	0445_MW020_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.18		
MW029	11 Dec 2017	0445E_MW29_S_171211	Normal	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.61		
	11 Nov 2021	0445_MW029_211111	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.98		
	05 May 2022	0445_MW029_220505	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.26		
	13 Oct 2022	0445_MW029_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.26		
	05 May 2023	0445_MW029_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.77		
	26 Oct 2023	0445_MW029_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.63		
	04 Apr 2024	0445_MW029_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.05		
MW034	28 Nov 2017	0445E_MW34_S_171128	Normal	ES1730397	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.08		
	16 Nov 2021	0445_MW034_211116	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	4.67		
	03 May 2022	0445_MW034_220503	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.25		
		0445_QC106_220503	Field_D	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.99		
		0445_QC206_220503	Interlab_D	886780	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	4.09	2.19	3.39
	13 Oct 2022	0445_MW034_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.38		
	05 May 2023	0445_MW034_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.76		
		0445_QC109_230505	Field_D	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.70		
		0445_QC209_230505	Interlab_D	987797	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	1.87	1.13	1.62
	26 Oct 2023	0445_MW034_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.58		
	04 Apr 2024	0445_MW034_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.85		

					Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																				
PFAS NEMP 2.0 Table 1 Health Recreational Water																				
PFAS NEMP 2.0 Table 5 Freshwater 95%																				
PFAS NEMP 2.0 Table 5 Freshwater 99%																				
Location Code	Date	Field ID	Sample Type	Lab Report Number																
MW035	28 Nov 2017	0445E_MW35_S_171128	Normal	ES1730397	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.14	<0.05	<0.05	20.4		
	16 Nov 2021	0445_MW035_211116	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	12.3		
	03 May 2022	0445_MW035_220503	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.10	<0.05	<0.05	18.7		
	13 Oct 2022	0445_MW035_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.18	<0.05	<0.05	21.5		
	05 May 2023	0445_MW035_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.21	<0.05	<0.05	21.1		
		0445_QC106_230505	Field_D	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.25	<0.05	<0.05	21.2		
		0445_QC206_230505	Interlab_D	987797	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	0.21	<0.01	<0.01	22.75	8.95	16.55
	26 Oct 2023	0445_MW035_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.20	<0.05	<0.05	22.2		
	04 Apr 2024	0445_MW035_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.25	<0.05	<0.05	21.9		
MW042	28 Nov 2017	0445E_MW42_D_171128	Normal	ES1730397	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.23	<0.05	<0.05	25.3		
	11 Nov 2021	QC204_211111	Interlab_D	841785	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	0.09	<0.01	<0.01	18.21	4.95	11.95
		0445_MW042_211111	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.07	<0.05	<0.05	14.2		
		0445_QC104_211111	Field_D	EM2122518	<0.04	<0.09	<0.04	<0.09	<0.09	<0.09	<0.09	<0.04	<0.04	<0.05	0.05	<0.05	<0.05	13.6		
	03 May 2022	0445_MW042_220503	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.18	<0.05	<0.05	23.1		
	13 Oct 2022	0445_MW042_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.20	<0.05	<0.05	22.3		
	05 May 2023	0445_MW042_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.22	<0.05	<0.05	19.5		
	26 Oct 2023	0445_MW042_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.24	<0.05	<0.05	20.8		
		0445_QC108_20231026	Field_D	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.21	<0.05	<0.05	19.1		
		0445_QC208_20231026	Interlab_D	1039507	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	0.18	<0.01	<0.01	18.82	7.85	13.65
	04 Apr 2024	0445_MW042_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.20	<0.05	<0.05	18.9		
MW043	28 Nov 2017	0445E_MW43_I_171128	Normal	ES1730397	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.46	<0.05	<0.05	48.1		
	16 Nov 2021	0445_MW043_211116	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.16	<0.05	<0.05	21.9		
	03 May 2022	0445_MW043_220503	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.24	<0.05	<0.05	24.7		
	13 Oct 2022	0445_MW043_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.23	<0.05	<0.05	22.4		
	05 May 2023	0445_MW043_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.22	<0.05	<0.05	14.7		
	26 Oct 2023	0445_MW043_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.19	<0.05	<0.05	15.5		
	04 Apr 2024	0445_MW043_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.18	<0.05	<0.05	15.9		
MW046_D	28 Nov 2017	0445E_MW46_D_171128	Normal	ES1730397	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.10	<0.05	<0.05	6.08		
	16 Nov 2021	0445_MW046_D_211116	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.11	<0.05	<0.05	7.45		
	03 May 2022	0445_MW046D_220503	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.09	<0.05	<0.05	6.70		
	13 Oct 2022	0445_MW046_D_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.45		
	05 May 2023	0445_MW046_D_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.44		
	26 Oct 2023	0445_MW046_D_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	5.11		
	04 Apr 2024	0445_MW046_D_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	5.07		
MW046_I	28 Nov 2017	0445E_MW47_I_171128	Normal	ES1730397	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.10	<0.05	<0.05	6.04		
	16 Nov 2021	0445_MW046_I_211116	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.09	<0.05	<0.05	7.13		
	04 May 2022	0445_MW046I_220503	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	4.58		
	13 Oct 2022	0445_MW046_I_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.66		
	05 May 2023	0445_MW046_I_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.27		
	26 Oct 2023	0445_MW046I_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	4.96		
	04 Apr 2024	0445_MW046_I_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	4.93		
		0445_QC108_240404	Field_D	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	4.73		
		0445_QC208_240404	Interlab_D	1086312	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	4.45	2.18	3.68
MW051	04 Dec 2017	0445S_MW04_S_171204	Normal	ES1731167	<0.05	<0.12	<0.05	<0.12	<0.12	<0.12	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05		
	10 Nov 2021	QC200_211110	Interlab_D	841785	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1	<0.01	<0.01
	11 Nov 2021	0445_MW051_211110	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	12 Nov 2021	0445_QC100_211110	Field_D	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	12 Oct 2022	0445_MW051_20221012	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.01		
		0445_QC104_20221012	Field_D	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.01		
		0445_QC204_221012	Interlab_D	932350	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1	0.02	0.02
	25 Oct 2023	0445_MW051_20231025	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.16		
	28 Nov 2023	0445_MW051_231128	Normal	EM2321318	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.25		

Table B1: Groundwater Analytical Results

Location Code	Date	Field ID	Sample Type	Lab Report Number	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																				
PFAS NEMP 2.0 Table 1 Health Recreational Water																				
PFAS NEMP 2.0 Table 5 Freshwater 95%																				
PFAS NEMP 2.0 Table 5 Freshwater 99%																				
MW052	01 Jun 2012	0445E_MW06-A_120601	Normal	ES1213811											<0.1					
		0445E_QC103_120601	Field_D	ES1213811											<0.1					
	07 Mar 2017	0445_MW06_070307	Normal	163195											<0.01	<0.01				
	11 Dec 2017	0445E_MW06A_S_171211	Normal	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	41.4		
	16 Nov 2021	0445_MW052_211116	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	16.7		
	05 May 2022	0445_MW052_220505	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	21.4		
	14 Oct 2022	0445_MW052_221014	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	17.4		
	05 May 2023	0445_MW052_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	29.1		
	25 Oct 2023	0445_MW052_20231025	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	261		
	27 Nov 2023	0445_MW052_231127	Normal	EM2321318	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	23.6		
	28 Nov 2023	0445_MW052_231128	Normal	EM2321318	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	28.4		
	04 Apr 2024	0445_MW052_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	33.7		
MW056	29 Nov 2017	0445S_BH111_P_171129	Normal	ES1730510	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.87		
	11 Nov 2021	0445_MW056_211111	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.32		
	12 Oct 2022	0445_MW056_221012	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.48		
		0445_QC105_20221012	Field_D	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.70		
		0445_QC205_221012	Interlab_D	932350	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	1.95	0.94	1.51
	25 Oct 2023	0445_MW056_20231025	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.01		
	04 Apr 2024	0445_MW056_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.89		
		0445_QC109_240404	Field_D	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.91		
		0445_QC209_240404	Interlab_D	1086312	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	1.82	0.71	1.26
MW303	09 Dec 2017	0445_MW303_S_171209	Normal	ES1731468	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0037		
	31 May 2024	0445_MW303_240531	Normal	EM2409333	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
MW304	06 Dec 2017	0445s_MW304_S_171206	Normal	ES1731108	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
	10 Nov 2021	0445_MW304_211110	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
	04 May 2022	0445_MW304_220504	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.15		
		0445_QC107_220504	Field_D	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.12		
		0445_QC207_220504	Interlab_D	886780	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.16	0.1	0.16
	10 Oct 2022	0445_MW304_221010	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.10	<0.05	<0.05	0.94		
	04 May 2023	0445_MW304_230504	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.05	<0.05	<0.05	0.46		
		0445_QC105_230504	Field_D	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.28		
		0445_QC205_230504	Interlab_D	987797	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.44	0.17	0.34
	26 Oct 2023	0445_MW304_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	04 Apr 2024	0445_MW304_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.10	<0.05	<0.05	0.86		
MW305	06 Dec 2017	0445s_MW305_S_171206	Normal	ES1731108	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.07		
	31 May 2024	0445_MW305_240531	Normal	EM2409333	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
MW307	06 Dec 2017	0445s_MW307_S_171206	Normal	ES1731108	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.45		
		0445s_QC110_171206	Field_D	ES1731108	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.41		
	11 Nov 2021	0445_MW307_211110	Normal	EM2122518	<0.04	<0.09	<0.04	<0.09	<0.09	<0.09	<0.09	<0.04	<0.04	0.90	65.4	<0.05	<0.05	928		
	22 Dec 2021	0445_MW307_211222	Normal	EM2125903	<0.05	<0.14	<0.05	<0.14	<0.14	<0.14	<0.14	<0.05	<0.05	0.90	100	<0.05	<0.05	1,270		
		0445_QC101_211222	Field_D	EM2125903	<0.05	<0.13	<0.05	<0.13	<0.13	<0.13	<0.13	<0.05	<0.05	0.91	102	<0.05	<0.05	1,240		
		0445_QC201_211222	Interlab_D	852797	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.33	26	<0.01	<0.01	774.38	74.9	464.9
	04 May 2022	0445_MW307_220504	Normal	EM2208381	<0.04	<0.09	<0.04	<0.09	<0.09	<0.09	<0.09	<0.04	<0.04	1.10	116	<0.05	<0.05	1,440		
	10 Oct 2022	0445_MW307_221010	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	0.11	11.6	<0.05	<0.05	145		
	04 May 2023	0445_MW307_230504	Normal	EM2308015	<0.04	<0.09	<0.04	<0.09	<0.09	<0.09	<0.09	<0.04	<0.04	0.58	82.8	<0.05	<0.05	954		
	26 Oct 2023	0445_MW307_20231026	Normal	EM2319356	<0.04	<0.09	<0.04	<0.09	<0.09	<0.09	<0.09	<0.04	<0.04	0.90	103	<0.05	<0.05	1,180		
	04 Apr 2024	0445_MW307_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	0.23	29.8	<0.05	<0.05	346		
MW311	05 Dec 2017	0445S_MW311_S_171205	Normal	ES1731167	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.09		
		0445S_QC108_171205	Field_D	ES1731167	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.09		
	17 Nov 2021	0445_MW311_211117	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	10 Oct 2022	0445_MW311_221010	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
	27 Oct 2023	0445_MW311_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04		
MW312	06 Dec 2017	0445s_MW312_S_171206	Normal	ES1731108	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.19		
	10 Nov 2021	0445_MW312_21110	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.22		
	04 May 2022	0445_MW312_220504	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.10		
	10 Oct 2022	0445_MW312_221010	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.15		
	04 May 2023	0445_MW312_230504	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.49		
	26 Oct 2023	0445_MW312_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.48		
	04 Apr 2024	0445_MW312_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.51		
MW313	09 Dec 2017	0445_MW313_D_171209	Normal	ES1731468	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0052		
	11 Nov 2021	0445_MW313_211111	Normal	EM2122519	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	15 Oct 2022	0445_MW313_221015	Normal	EM2220271	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
	27 Oct 2023	0445_MW313_20231027	Normal	EM2319354	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		

					Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																				
PFAS NEMP 2.0 Table 1 Health Recreational Water																				
PFAS NEMP 2.0 Table 5 Freshwater 95%																				
PFAS NEMP 2.0 Table 5 Freshwater 99%																				
Location Code	Date	Field ID	Sample Type	Lab Report Number																
MW315	06 Dec 2017	0445s_MW315_D_171206	Normal	ES1731108	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	17 Nov 2021	0445_MW315_211117	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
MW317	06 Dec 2017	0445s_MW317_D_171206	Normal	ES1731108	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.05		
MW319	04 Dec 2017	0445S_MW319_D_171204	Normal	ES1731167	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.38		
	10 Nov 2021	0445_MW319_211110	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.37		
		QC201_211110	Interlab_D	841785	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.55	0.39	0.51
		0445_QC101_211110	Field_D	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.39		
	12 Oct 2022	0445_MW319_221012	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.26		
		0445_QC203_221012	Interlab_D	932350	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.28	0.22	0.28
	25 Oct 2023	0445_MW319_20231025	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.22		
		0445_QC106_20231025	Field_D	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.21		
		0445_QC206_20231025	Interlab_D	1039507	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.17	0.14	0.17
MW321	05 Dec 2017	0445S_MW321_S_171205	Normal	ES1731167	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	8.45		
	10 Nov 2021	0445_MW321_211110	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.96		
	12 Oct 2022	0445_MW321_221210	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.78		
		0445_QC102_20221012	Field_D	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.73		
		0445_QC202_221012	Interlab_D	932350	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1	0.07	0.09
	25 Oct 2023	0445_MW321_20231025	Normal	EM2319356	<0.04	<0.09	<0.04	<0.09	<0.09	<0.09	<0.09	<0.04	<0.04	<0.05	1.72	1.85	<0.05	1,280		
	27 Nov 2023	0445_MW321_231127	Normal	EM2321318	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	1.14	0.62	<0.05	667		
	28 Nov 2023	0445_MW321_231128	Normal	EM2321318	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	1.68	1.46	<0.05	1,070		
		0445_QC101_231128	Field_D	EM2321318	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	1.06	0.59	<0.05	628		
		0445_QC201_231128	Interlab_D	1049115	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	1.0	0.33	<0.01	618.79	485.8	584.8
MW323	30 Nov 2017	0445S_MW323_S_171130	Normal	ES1730642	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
		0445S_QC104_S_171130	Field_D	ES1730642	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
		0445S_QC204_171130	Interlab_D	575864	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1		
	10 Nov 2021	0445_MW323_211110	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	12 Oct 2022	0445_MW323_221210	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	25 Oct 2023	0445_MW323_20231025	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
MW326	04 Dec 2017	0445S_MW326_S_171204	Normal	ES1731167	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03		
	10 Nov 2021	0445_MW326_211110	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.01		
MW329	04 Dec 2017	0445S_MW329_S_171204	Normal	ES1731167	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
	10 Nov 2021	0445_MW329_21110	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.24		
		0445_QC102_211110	Field_D	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.24		
		QC202_211110	Interlab_D	841785	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.28	0.03	0.19
	12 Oct 2022	0445_MW329_221012	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.06	<0.05	<0.05	0.73		
	25 Oct 2023	0445_MW329_20231025	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.65		
MW342	07 Dec 2017	0445N_MW342_S_171207	Normal	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.20		
	11 Nov 2021	0445_MW342_211111	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	16.8		
	22 Dec 2021	0445_MW342_211222	Normal	EM2125903	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	13.0		
		0445_QC100_211222	Field_D	EM2125903	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	13.2		
		0445_QC200_211222	Interlab_D	852797	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	17.88	6.12	12.92
	06 May 2022	0445_MW342_220506	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	11.3		
		0445_QC111_220506	Field_D	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	11.3		
		0445_QC211_220506	Interlab_D	886780	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	15.27	5.11	11.51
	15 Oct 2022	0445_MW342_221015	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	7.77		
	04 May 2023	0445_MW342_230504	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	6.23		
	26 Oct 2023	0445_MW342_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	6.92		
	04 Apr 2024	0445_MW342_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	6.55		
MW345	07 Dec 2017	0445N_MW345_S_171207	Normal	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.33		
	17 Nov 2021	0445_MW345_211117	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.36		
	06 May 2022	0445_MW345_220506	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.31		
	12 Oct 2022	0445_MW345_221014	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.41		
	05 May 2023	0445_MW345_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.41		
	26 Oct 2023	0445_MW345_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.44		
	04 Apr 2024	0445_MW345_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.22		
MW346	07 Dec 2017	0445N_MW346_S_171207	Normal	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
		0445N_QC212_171207	Normal	577514	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1		
		0445N_QC112_171207	Field_D	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	16 Nov 2021	0445_MW346_211117	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	06 May 2022	0445_MW346_220506	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	12 Oct 2022	0445_MW346_221012	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.17		
	04 May 2023	0445_MW346_230504	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04		
	26 Oct 2023	0445_MW346_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	04 Apr 2024	0445_MW346_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03		

					Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																				
PFAS NEMP 2.0 Table 1 Health Recreational Water																				
PFAS NEMP 2.0 Table 5 Freshwater 95%																				
PFAS NEMP 2.0 Table 5 Freshwater 99%																				
Location Code	Date	Field ID	Sample Type	Lab Report Number																
MW350_D	10 Dec 2017	0445E_MW350_D_171210	Normal	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.79		
	11 Nov 2021	0445_MW350_D_211111	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.77		
	03 May 2022	0445_MW350_D_220503	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.75		
	14 Oct 2022	0445_MW350_D_221014	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.86		
	05 May 2023	0445_MW350__D_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.93		
	25 Oct 2023	0445_MW350_D_20231025	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.93		
	04 Apr 2024	0445_MW350_D_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.81		
		0445_QC105_240404	Field_D	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.79		
		0445_QC205_240404	Interlab_D	1086312	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.72	0.37	0.57
MW350_S	10 Dec 2017	0445E_MW350_S_171210	Normal	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.42	<0.05	<0.05	137		
	11 Nov 2021	0445_MW350_S_211111	Normal	EM2122518	<0.04	<0.09	<0.04	<0.09	<0.09	<0.09	<0.09	<0.04	<0.04	<0.05	0.37	<0.05	<0.05	70.1		
		0445_QC105_211111	Field_D	EM2122518	<0.04	<0.09	<0.04	<0.09	<0.09	<0.09	<0.09	<0.04	<0.04	<0.05	0.29	<0.05	<0.05	71.0		
		QC205_211111	Interlab_D	841785	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	0.43	<0.01	<0.01	95.78	21.8	71.8
	06 May 2022	0445_MW350_S_220506	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	1.22	<0.05	<0.05	63.0		
	14 Oct 2022	0445_MW350_S_221014	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.80	<0.05	<0.05	50.5		
	05 May 2023	0445_MW350_S_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	1.91	<0.05	<0.05	131		
	25 Oct 2023	0445_MW350_S_20231025	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	2.38	<0.05	<0.05	176		
	04 Apr 2024	0445_MW350_S_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	2.48	<0.05	<0.05	151		
MW351	11 Dec 2017	0445E_MW351_S_171211	Normal	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.07		
	16 Nov 2021	0445_MW351_211116	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
	03 May 2022	0445_MW351_220503	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
		0445_QC100_220503	Field_D	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
		0445_QC200_220503	Interlab_D	886780	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1	0.01	0.02
	13 Oct 2022	0445_MW351_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04		
	05 May 2023	0445_MW351_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.05		
		0445_QC107_230505	Field_D	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04		
		0445_QC207_230505	Interlab_D	987797	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1	0.02	0.04
	25 Oct 2023	0445_MW351_20231025	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04		
	04 Apr 2024	0445_MW351_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.10		
MW352	11 Dec 2017	0445E_MW352_S_171211	Normal	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.10		
	16 Nov 2021	0445_MW352_211116	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.01		
	03 May 2022	0445_MW352_220503	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.01		
	13 Oct 2022	0445_MW352_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
	05 May 2023	0445_MW352_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
	25 Oct 2023	0445_MW352_20231025	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.01		
	04 Apr 2024	0445_MW352_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
MW353	11 Dec 2017	0445E_MW353_S_171211	Normal	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	12.3		
	12 Nov 2021	0445_MW353_211111	Normal	EM2122518	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	9.19		
	05 May 2022	0445_MW353_220505	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	7.69		
	13 Oct 2022	0445_MW353_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	6.35		
	05 May 2023	0445_MW353_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	15.9		
	26 Oct 2023	0445_MW353_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	29.8		
	04 Apr 2024	0445_MW353_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	10.8		
MW354	11 Dec 2017	0445E_MW354_S_171211	Normal	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.19		
		0445E_QC116_171211	Field_D	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.38		
	16 Nov 2021	0445_MW354_211116	Normal	EM2122998	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.50		
	05 May 2022	0445_MW354_220505	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.24		
	13 Oct 2022	0445_MW354_221013	Normal	EM2220286	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.15		
	05 May 2023	0445_MW354_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.14		
	26 Oct 2023	0445_MW354_20231026	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.08		
		0445_QC109_20231026	Field_D	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.09		
		0445_QC209_20231026	Interlab_D	1039507	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1	0.04	0.06
	04 Apr 2024	0445_MW354_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.05		
		0445_QC107_240404	Field_D	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.08		
		0445_QC207_240404	Interlab_D	1086312	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1	0.03	0.05
MW356	09 Dec 2017	0445_MW356_S_171209	Normal	ES1731468	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0019		
	12 Nov 2021	0445_MW356_211112	Normal	EM2122519	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	07 May 2022	0445_MW356_220505	Normal	EM2208383	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
	05 May 2023	0445_MW356_230505	Normal	EM2308009	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	25 Oct 2023	0445_MW356_20231025	Normal	EM2319354	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	05 Apr 2024	0445_MW356_240405	Normal	EM2405435	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.01		

Location Code	Date	Field ID	Sample Type	Lab Report Number	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																				
PFAS NEMP 2.0 Table 1 Health Recreational Water																				
PFAS NEMP 2.0 Table 5 Freshwater 95%																				
PFAS NEMP 2.0 Table 5 Freshwater 99%																				
MW357	09 Dec 2017	0445_MW357_S_171209	Normal	ES1731468	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.136		
		0445_QC114_171209	Field_D	ES1731468	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.127		
	12 Nov 2021	0445_MW357_211112	Normal	EM2122519	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.07		
	06 May 2022	0445_MW357_220506	Normal	EM2208383	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04		
	12 Oct 2022	0445_MW357_221012	Normal	EM2220271	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.06		
	04 May 2023	0445_MW357_230504	Normal	EM2308009	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.08		
	24 Oct 2023	0445_MW357_20231024	Normal	EM2319354	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.05		
	04 Apr 2024	0445_MW357_240404	Normal	EM2405435	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04		
MW359	05 Dec 2017	0445S_MW359_D_171205	Normal	ES1731167	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03		
	28 Nov 2023	0445_MW359_231128	Normal	EM2321318	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.26		
MW360	09 Dec 2017	0445_MW360_S_171209	Normal	ES1731468	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.263		
	11 Nov 2021	0445_MW360_211111	Normal	EM2122519	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.15		
	06 May 2022	0445_MW360_220506	Normal	EM2208383	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.11		
	15 Oct 2022	0445_MW360_221015	Normal	EM2220271	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.17		
	04 May 2023	0445_MW360_230504	Normal	EM2308009	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.14		
	25 Oct 2023	0445_MW360_20231025	Normal	EM2319354	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.12		
	04 Apr 2024	0445_MW360_240404	Normal	EM2405435	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.07		
MW361	09 Dec 2017	0445_MW361_S_171209	Normal	ES1731468	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.002	<0.001	<0.001	0.386		
		0445_QC115_171209	Field_D	ES1731468	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.002	<0.001	<0.001	0.360		
	11 Nov 2021	0445_MW361_211111	Normal	EM2122519	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.22		
	07 May 2022	0445_MW361_220506	Normal	EM2208381	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.24		
	15 Oct 2022	0445_MW361_221015	Normal	EM2220271	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.11		
	04 May 2023	0445_MW361_230504	Normal	EM2308009	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.14		
	25 Oct 2023	0445_MW361_20231025	Normal	EM2319354	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.22		
	04 Apr 2024	0445_MW361_240404	Normal	EM2405435	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.46		
MW403	10 Dec 2017	0445E_BH01_S_171210	Normal	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	1.01	0.05	<0.05	145		
	12 Nov 2021	0445_MW403_211111	Normal	EM2122518	<0.04	<0.10	<0.04	<0.10	<0.10	<0.10	<0.10	<0.04	<0.04	<0.05	1.41	<0.05	<0.05	129		
	05 May 2022	0445_MW403_220505	Normal	EM2208381	<0.04	<0.09	<0.04	<0.09	<0.09	<0.09	<0.09	<0.04	<0.04	<0.05	0.95	<0.05	<0.05	137		
	14 Oct 2022	0445_MW403_221014	Normal	EM2220286	<0.03	<0.08	<0.03	<0.08	<0.08	<0.08	<0.08	<0.03	<0.03	<0.05	0.50	0.05	<0.05	112		
	05 May 2023	0445_MW403_230505	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.53	<0.05	<0.05	116		
	26 Oct 2023	0445_MW403_2023102	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.68	<0.05	<0.05	150		
	05 Apr 2024	0445_MW403_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.54	<0.05	<0.05	124		
MW404	10 Dec 2017	0445E_BH02_S_171210	Normal	ES1731478	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.12	<0.05	<0.05	172		
	11 Nov 2021	0445_MW404_211111	Normal	EM2122518	<0.04	<0.10	<0.04	<0.10	<0.10	<0.10	<0.10	<0.04	<0.04	<0.05	0.06	<0.05	<0.05	108		
		0445_QC103_211111	Field_D	EM2122518	<0.04	<0.11	<0.04	<0.11	<0.11	<0.11	<0.11	<0.04	<0.04	<0.05	0.06	<0.05	<0.05	96.3		
		QC203_211111	Interlab_D	841785	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	0.08	<0.01	<0.01	110.86	50.4	87.4
	05 May 2022	0445_MW404_220505	Normal	EM2208381	<0.04	<0.09	<0.04	<0.09	<0.09	<0.09	<0.09	<0.04	<0.04	<0.05	<0.05	<0.05	<0.05	146		
	14 Oct 2022	0445_MW404_221014	Normal	EM2220286	<0.03	<0.08	<0.03	<0.08	<0.08	<0.08	<0.08	<0.03	<0.03	<0.05	0.07	<0.05	<0.05	223		
	05 May 2023	0445_MW404_230505	Normal	EM2308015	<0.03	<0.09	<0.03	<0.09	<0.09	<0.09	<0.09	<0.03	<0.03	<0.05	0.12	<0.05	<0.05	302		
	26 Oct 2023	0445_MW404_20231025	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.10	<0.05	<0.05	300		
	04 Apr 2024	0445_MW404_240404	Normal	EM2405446	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.10	<0.05	<0.05	259		
MW411	25 May 2022	0445E_MW411_S_220525	Normal	893006	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.772		
	31 May 2023	0445E_MW411_S_230531	Normal	995768	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.006	<0.05	<0.05	0.21		
	30 May 2024	0445_MW411_240530	Normal	EM2409333	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.15		
		0445_QC100_240530	Field_D	EM2409333	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.18		
		0445_QC200_240530	Interlab_D	1105323	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.24	0.1	0.18
MW412	25 May 2022	0445E_MW412_S_220525	Normal	893006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.006	ND	ND	4.333	
	31 May 2023	0445E_MW412_S_230531	Normal	995768	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.595	
	30 May 2024	0445_MW412_240530	Normal	EM2409333	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.63		
MW413	25 May 2022	0445E_MW413_S_220525	Normal	893006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.002	ND	ND	4.58	
	31 May 2023	0445E_MW413_S_230531	Normal	995768	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.856	
	30 May 2024	0445_MW413_240530	Normal	EM2409333	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.01		
MW414	25 May 2022	0445E_MW414_S_220525	Normal	893006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.973	
	31 May 2023	0445E_MW414_S_230531	Normal	995768	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	ND	ND	2.566	
MW415	25 May 2022	0445E_MW415_S_220525	Normal	893006	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.001	0.031	0.001	ND	17.325		
	25 May 2022	0445E_QC101_220525	Field_D	893006	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.002	0.030	ND	ND	17.524		
	31 May 2023	0445E_MW415_S_230531	Normal	995768	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.009	ND	ND	5.033		
	30 May 2024	0445_MW415_240530	Normal	EM2409333	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.08	<0.05	<0.05	12.9		
MW416	06 May 2023	0445_MW416_230506	Normal	EM2308015	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	25 Oct 2023	0445_MW416_20231025	Normal	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
		0445_QC105_20231025	Field_D	EM2319356	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
		0445_QC205_20231024	Interlab_D	1039507	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1	<0.01	<0.01

Table B1: Groundwater Analytical Results

					Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																				
PFAS NEMP 2.0 Table 1 Health Recreational Water																				
PFAS NEMP 2.0 Table 5 Freshwater 95%																				
PFAS NEMP 2.0 Table 5 Freshwater 99%																				
Location Code	Date	Field ID	Sample Type	Lab Report Number																
OTH019	31 Oct 2018	0445_OTH019_181031	Normal	ES1832670	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.208		
		0445_QC120_181031	Field_D	ES1832670	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.217		
		0445_QC220_181031	Interlab_D	625560	<0.001	<0.001	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.001	<0.001	0.194	0.041	0.161
	15 Nov 2021	0445_OTH019_211115	Normal	EM2122969	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.18		
	05 May 2022	0445_OTH019_220505	Normal	EM2208348	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.15		
	10 Nov 2022	0445_OTH019_221110	Normal	EM2222364	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.13		
		0445_QC110_221110	Field_D	EM2222364	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.13		
		0445_QC210_221110	Interlab_D	941104	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.15	0.05	0.15
	02 May 2023	0445_OTH019_230502	Normal	EM2308003	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.16		
	23 Oct 2023	0445_OTH019_20231023	Normal	EM2319355	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.22		
	03 Apr 2024	0445_OTH019_240403	Normal	EM2405436	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.17		

Notes

Denotes first time detection above LOR in latest monitoring round

Denotes new exceedance of lowest adopted screening criteria in latest monitoring round

					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoro undecanoic acid (PFUnDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**														
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*														
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220															
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*															
Location Code	Date	Field ID	Sample Type	Lab Report Number																	
SW307	17 Nov 2021	0445_SW307_211117	Normal	EM2122998	*0.07*	<0.01	**0.17**		<0.02	<0.02	0.10	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	14 Oct 2022	0445_SW307_221013	Normal	EM2220286	*0.14*	<0.01	**0.25**		<0.02	<0.02	0.11	<0.02	<0.02	<0.1	<0.02	0.02		<0.02	<0.02	<0.02	<0.02
SW310	17 Nov 2021	0445_SW310_211117	Normal	EM2122998	*0.11*	<0.01	**0.32**		<0.02	<0.02	0.21	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	10 Oct 2022	0445_SW310_221010	Normal	EM2220286	*0.18*	<0.01	**0.46**		0.04	0.03	0.28	<0.02	<0.02	<0.1	<0.02	0.05		<0.02	<0.02	<0.02	<0.02
	03 May 2023	0445_SW310_230503	Normal	EM2308015	*0.09*	<0.01	**0.12**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	31 May 2024	0445_SW310_240531	Normal	EM2409333	*0.07*	<0.01	**0.13**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
SW311	17 Nov 2021	0445_SW311_211117	Normal	EM2122998	*1.75*	0.03	*2.16*		0.03	0.02	0.41	0.03	<0.02	<0.1	0.04	0.06		<0.02	<0.02	<0.02	<0.02
	10 Oct 2022	0445_QC100_20221010	Field_D	EM2220286	*0.97*	0.07	**1.89**		0.05	0.04	0.92	0.03	<0.02	0.2	0.24	0.29		0.04	<0.02	<0.02	<0.02
		0445_QC200_221010	Interlab_D	932350	*1.2*	0.10	*2.4*	<0.01	0.07	0.06	1.2	0.04	<0.01	0.23	0.34	0.36	0.03	0.06	0.02	<0.01	<0.01
		0445_SW311_221010	Normal	EM2220286	*0.74*	0.07	**1.56**		0.04	0.04	0.82	0.03	<0.02	<0.1	0.22	0.26		0.05	<0.02	<0.02	<0.02
	06 May 2023	0445_SW311_230506	Normal	EM2308015	*0.18*	<0.01	**0.20**		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	31 May 2024	0445_SW311_240531	Normal	EM2409333	*0.30*	<0.01	**0.36**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02
SW313	17 Nov 2021	0445_QC111_211117	Field_D	EM2122998	*3.85*	0.30	*5.13*		0.10	0.07	1.28	0.06	<0.02	0.1	0.33	0.48		0.11	0.19	<0.02	<0.02
		0445_QC211_211117	Interlab_D	842787	*4.5*	0.35	*6.1*	0.02	0.08	0.08	1.6	0.08	<0.01	0.23	0.32	0.53	0.04	0.12	0.18	0.01	<0.01
		0445_SW313_211117	Normal	EM2122998	*3.13*	0.30	*4.43*		0.10	0.06	1.30	0.07	<0.02	0.1	0.31	0.44		0.11	0.18	<0.02	<0.02
	10 Oct 2022	0445_SW313_221010	Normal	EM2220286	*2.91*	0.10	*3.97*		0.10	0.08	1.06	0.04	<0.02	0.1	0.37	0.44		0.05	0.08	<0.02	<0.02
	01 May 2023	0445_SW313_230501	Normal	EM2308015	*1.90*	0.14	*3.33*		0.14	0.12	1.43	0.03	<0.02	0.1	0.41	0.59		0.10	0.08	<0.02	<0.02
	23 Oct 2023	0445_SW313_20231023	Normal	EM2319356	*3.14*	0.19	*5.53*		0.21	0.17	2.39	0.07	<0.02	0.3	0.79	1.10		0.14	0.11	<0.02	<0.02
SW316	17 Oct 2017	0445S_SW316_0.1_171017	Normal	ES1726190	*0.722*	0.0140	**1.11**		0.0242	0.0306	0.388	0.0232	0.0020	<0.002	0.0080	0.0418		0.0062	<0.0020	<0.0020	<0.0020
	17 Nov 2021	0445_SW316_211117	Normal	EM2122998	*0.52*	0.02	**1.02**		0.04	0.03	0.50	0.02	<0.02	<0.1	0.04	0.07		<0.02	<0.02	<0.02	<0.02
	16 May 2022	0445S_SW316_220516	Normal	EM2209833	*0.14*	<0.01	**0.23**		<0.02	<0.02	0.09	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	10 Oct 2022	0445_SW316_221010	Normal	EM2220286	*0.91*	0.03	**1.37**		0.03	0.02	0.46	0.03	<0.02	<0.1	0.04	0.08		<0.02	<0.02	<0.02	<0.02
	03 May 2023	0445_QC103_230503	Field_D	EM2308015	*0.11*	<0.01	**0.19**		0.02	<0.02	0.08	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
		0445_QC203_230503	Interlab_D	987797	*0.14*	<0.01	**0.21**		0.02	<0.01	0.07	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		0445_SW316_230503	Normal	EM2308015	*0.11*	<0.01	**0.18**		<0.02	<0.02	0.07	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	31 May 2024	0445_SW316_240531	Normal	EM2409333	*0.13*	<0.01	**0.18**		0.03	<0.02	0.05	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
SW321	17 Nov 2021	0445_QC112_211117	Field_D	EM2122998	*3.88*	0.08	*6.24*		0.18	0.17	2.36	0.10	<0.02	<0.1	0.05	0.36		0.03	<0.02	<0.02	<0.02
		0445_QC212_211117	Interlab_D	842787	*7.5*	0.11	*10.3*	<0.01	0.18	0.26	2.8	0.13	<0.01	0.06	0.06	0.45	0.05	0.04	<0.01	<0.01	<0.01
		0445_SW321_211117	Normal	EM2122998	*3.48*	0.09	*5.80*		0.16	0.16	2.32	0.10	<0.02	<0.1	0.06	0.35		0.03	<0.02	<0.02	<0.02
	04 May 2022	0445_SW321_220504	Normal	EM2208381	*6.13*	0.05	*7.09*		0.05	0.05	0.96	0.10	<0.02	<0.1	0.02	0.11		<0.02	<0.02	<0.02	<0.02
	10 Oct 2022	0445_SW321_221010	Normal	EM2220286	*0.96*	<0.01	**1.12**		<0.02	<0.02	0.16	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	01 May 2023	0445_QC100_230501	Field_D	EM2308015	*4.28*	0.03	*4.97*		0.04	0.05	0.69	0.05	<0.02	<0.1	<0.02	0.08		<0.02	<0.02	<0.02	<0.02
		0445_QC200_230501	Interlab_D	987797	*4.7*	0.03	*5.32*		0.04	0.04	0.62	0.07	<0.01	<0.05	<0.01	0.07	0.01	<0.01	<0.01	<0.01	<0.01
		0445_SW321_230501	Normal	EM2308015	*3.97*	0.03	*4.67*		0.04	0.05	0.70	0.05	<0.02	<0.1	<0.02	0.08		<0.02	<0.02	<0.02	<0.02
	24 Oct 2023	0445_SW321_20231023	Normal	EM2319356	*3.10*	0.02	*3.51*		0.03	<0.02	0.41	0.03	<0.02	<0.1	<0.02	0.05		<0.02	<0.02	<0.02	<0.02
	31 May 2024	0445_SW321_240531	Normal	EM2409333	*1.33*	0.02	**1.75**		0.04	0.03	0.42	<0.02	<0.02	<0.1	0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02
SW322	17 Nov 2021	0445_SW322_211117	Normal	EM2122998	*2.38*	0.07	*4.48*		0.16	0.16	2.10	0.08	<0.02	<0.1	0.05	0.31		0.03	<0.02	<0.02	<0.02
	04 May 2022	0445_SW322_220504	Normal	EM2208381	*6.97*	0.06	*8.01*		0.04	0.06	1.04	0.11	<0.02	<0.1	0.02	0.12		<0.02	<0.02	<0.02	<0.02
	10 Oct 2022	0445_SW322_221010	Normal	EM2220286	*0.83*	<0.01	**1.00**		<0.02	<0.02	0.17	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_SW322_230504	Normal	EM2308015	*3.13*	0.02	*3.81*		0.04	0.04	0.68	0.04	<0.02	<0.1	<0.02	0.06		<0.02	<0.02	<0.02	<0.02
	23 Oct 2023	0445_SW322_20231023	Normal	EM2319356	*3.00*	0.02	*3.37*		0.02	0.02	0.37	<0.02	<0.02	<0.1	<0.02	0.05		<0.02	<0.02	<0.02	<0.02
	31 May 2024	0445_SW322_240531	Normal	EM2409333	*1.00*	0.01	**1.36**		0.04	0.03	0.36	<0.02	<0.02	<0.1	0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02
SW323	17 Oct 2017	0445S_SW323_0.2_171017	Normal	ES1726190	*1.13*	0.0304	**1.42**		0.0212	0.0278	0.287	0.0212	0.0044	<0.002	0.0240	0.0652		0.0210	0.0094	0.0032	<0.0020
	17 Nov 2021	0445_SW323_211117	Normal	EM2122998	*0.66*	0.03	**0.94**		0.02	<0.02	0.28	<0.02	<0.02	<0.1	0.04	0.06		<0.02	<0.02	<0.02	<0.02
	04 May 2022	0445_SW323_220504	Normal	EM2208381	*0.65*	0.02	**0.85**		0.03	<0.02	0.20	<0.02	<0.02	<0.1	0.03	0.04		<0.02	<0.02	<0.02	<0.02
	10 Oct 2022	0445_SW323_221010	Normal	EM2220286	*0.56*	0.03	**0.79**		0.04	<0.02	0.23	<0.02	<0.02	<0.1	0.03	0.05		<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_SW323_230504	Normal	EM2308015	*0.63*	0.02	**0.86**		0.03	0.02	0.23	<0.02	<0.02	<0.1	0.03	0.06		<0.02	<0.02	<0.02	<0.02
	23 Oct 2023	0445_QC103_20231023	Field_D	EM2319356	*1.08*	0.04	**1.34**		<0.02	<0.02	0.26	<0.02	<0.02	<0.1	0.04	0.07		0.02	<0.02	<0.02	<0.02
		0445_QC203_20231023	Interlab_D	1039507	*0.88*	0.03	**1.11**		0.02	0.02	0.23	0.01	<0.01	<0.05	0.03	0.05	<0.01	0.02	<0.01	<0.01	<0.01
		0445_SW323_20231023	Normal	EM2319356	*1.02*	0.03	**1.29**		<0.02	0.02	0.27	<0.02	<0.02	<0.1	0.04	0.06		0.02	<0.02	<0.02	<0.02
	31 May 2024	0445_SW323_240531	Normal	EM2409333	*0.26*	<0.01	**0.35**		<0.02	<0.02	0.09	<0.02	<0.02	<0.1	0.03	0.03	<0.02	<0.02	<0.02	<0.02	<0.02

					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**														
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*														
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220															
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*															
Location Code	Date	Field ID	Sample Type	Lab Report Number																	
SW324	20 Oct 2017	0445S_SW324_0.1_171020	Normal	ES1726682	*1.53*	0.155	*2.03*		0.0759	0.130	0.496	0.0823	<0.0005	<0.002	0.114	0.139		0.0654	0.0372	0.0075	0.0022
	17 Nov 2021	0445_QC110_211117	Field_D	EM2122998	*1.61*	0.08	*2.23*		0.06	0.04	0.62	0.03	<0.02	<0.1	0.10	0.15		0.04	<0.02	<0.02	<0.02
		0445_QC210_211117	Interlab_D	842787	*2.6*	0.11	*3.6*	0.02	0.05	0.06	1.0	0.05	0.01	0.10	0.11	0.21	0.04	0.05	0.02	<0.01	<0.01
		0445_SW324_211117	Normal	EM2122998	*1.86*	0.10	*2.61*		0.06	0.05	0.75	0.04	<0.02	<0.1	0.10	0.17		0.05	0.02	<0.02	<0.02
	04 May 2022	0445_SW324_220504	Normal	EM2208381	*0.96*	0.03	**1.20**		<0.02	<0.02	0.24	<0.02	<0.02	<0.1	0.04	0.04		0.02	<0.02	<0.02	<0.02
	10 Oct 2022	0445_SW324_221010	Normal	EM2220286	*1.46*	0.06	**1.96**		0.04	0.03	0.50	0.04	<0.02	<0.1	0.06	0.11		0.03	<0.02	<0.02	<0.02
	01 May 2023	0445_QC101_230501	Field_D	EM2308015	*1.80*	0.09	*2.44*		0.07	0.05	0.64	0.02	<0.02	<0.1	0.12	0.18		0.05	0.02	<0.02	<0.02
		0445_QC201_230501	Interlab_D	987797	*2.1*	0.08	*2.81*		0.05	0.05	0.71	0.03	<0.01	0.06	0.11	0.16	0.02	0.05	0.02	<0.01	<0.01
		0445_SW324_230501	Normal	EM2308015	*1.80*	0.09	*2.46*		0.07	0.06	0.66	0.03	<0.02	<0.1	0.12	0.18		0.06	<0.02	<0.02	<0.02
	26 Oct 2023	0445_SW324_20231026	Normal	EM2319356	*2.04*	0.06	*2.34*		0.04	<0.02	0.30	0.02	<0.02	<0.1	0.07	0.10		0.03	<0.02	<0.02	<0.02
	03 Apr 2024	0445_QC104_240403	Field_D	EM2405446	*1.18*	0.07	**1.83**		0.06	0.05	0.65	<0.02	<0.02	<0.1	0.12	0.15		0.06	<0.02	<0.02	<0.02
		0445_QC204_240403	Interlab_D	1086312	*1.1*	0.07	**1.67**		0.06	0.04	0.57	0.02	<0.01	0.06	0.14	0.14	0.03	0.07	0.02	<0.01	<0.01
		0445_SW324_240403	Normal	EM2405446	*1.21*	0.06	**1.87**		0.06	0.04	0.66	<0.02	<0.02	<0.1	0.13	0.14		0.07	<0.02	<0.02	<0.02
SW326	17 Nov 2021	0445_SW326_211117	Normal	EM2122998	*7.99*	0.38	*10.1*		0.22	0.19	2.14	0.22	0.07	0.2	0.37	0.63		0.19	0.04	<0.02	<0.02
	04 May 2022	0445_SW326_220504	Normal	EM2208381	*0.60*	0.01	**0.69**		<0.02	<0.02	0.09	<0.02	<0.02	<0.1	0.04	0.02		<0.02	<0.02	<0.02	<0.02
	14 Oct 2022	0445_SW326_221014	Normal	EM2220286	*0.48*	0.02	**0.65**		<0.02	<0.02	0.17	<0.02	<0.02	<0.1	0.02	0.04		<0.02	<0.02	<0.02	<0.02
	01 May 2023	0445_SW326_230501	Normal	EM2308015	*1.20*	0.04	**1.37**		0.02	<0.02	0.17	<0.02	<0.02	<0.1	0.04	0.06		0.02	<0.02	<0.02	<0.02
	23 Oct 2023	0445_QC102_20231023	Field_D	EM2319356	*2.68*	0.12	*3.31*		0.04	0.04	0.63	0.06	<0.02	<0.1	0.11	0.18		0.06	0.03	<0.02	<0.02
		0445_QC202_20231023	Interlab_D	1039507	*2.8*	0.10	*3.39*		0.04	0.04	0.59	0.06	<0.01	0.06	0.11	0.14	0.02	0.05	0.03	<0.01	<0.01
		0445_SW326_20231023	Normal	EM2319356	*2.62*	0.11	*3.21*		0.05	0.04	0.59	0.06	<0.02	<0.1	0.10	0.17		0.06	0.03	<0.02	<0.02
	02 Apr 2024	0445_QC100_240402	Field_D	EM2405446	*0.27*	0.01	**0.45**		0.05	<0.02	0.18	<0.02	<0.02	<0.1	0.05	0.06		<0.02	<0.02	<0.02	<0.02
		0445_QC200_240402	Interlab_D	1086312	*0.27*	0.02	**0.43**		0.04	0.01	0.16	<0.01	<0.01	<0.05	0.06	0.05	0.05	0.01	<0.01	<0.01	<0.01
		0445_SW326_240402	Normal	EM2405446	*0.26*	0.01	**0.45**		0.05	<0.02	0.19	<0.02	<0.02	<0.1	0.06	0.05		<0.02	<0.02	<0.02	<0.02
SW332	17 Oct 2017	0445S_SW332_0.05_171017	Normal	ES1726190	*3.98*	0.0496	*4.45*		0.149	0.0898	0.472	0.0436	0.0244	0.032	0.161	0.419		0.0302	<0.0020	<0.0020	<0.0020
	17 Nov 2021	0445_SW332_211117	Normal	EM2122998	*0.02*	<0.01	0.04		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	14 Oct 2022	0445_SW332_221014	Normal	EM2220286	*0.04*	<0.01	**0.10**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	03 May 2023	0445_SW332_230503	Normal	EM2308015	*0.01*	<0.01	0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	28 Nov 2023	0445_QC100_231128	Field_D	EM2321318	*3.22*	0.05	*3.96*		0.27	0.12	0.74	0.04	<0.02	0.2	0.16	0.34		0.02	<0.02	<0.02	<0.02
		0445_QC200_231128	Interlab_D	1049115	*3.3*	0.04	*3.96*		0.23	0.09	0.66	0.04	<0.01	0.19	0.14	0.27	0.14	0.02	<0.01	<0.01	<0.01
		0445_SW332_231128	Normal	EM2321318	*3.52*	0.06	*4.30*		0.28	0.12	0.78	0.05	<0.02	0.2	0.16	0.33		0.02	<0.02	<0.02	<0.02
	31 May 2024	0445_QC101_240531	Field_D	EM2409333	*0.50*	0.02	**0.93**		0.14	0.07	0.43	<0.02	<0.02	<0.1	0.09	0.23	0.10	<0.02	<0.02	<0.02	<0.02
		0445_QC201_240531	Interlab_D	1105323	*0.64*	0.02	**1.08**		0.17	0.09	0.44	0.01	<0.01	0.11	0.09	0.24	0.09	0.02	<0.01	<0.01	<0.01
		0445_SW332_240531	Normal	EM2409333	*0.53*	0.02	**0.94**		0.14	0.07	0.41	<0.02	<0.02	<0.1	0.10	0.24	0.10	<0.02	<0.02	<0.02	<0.02
SW333	17 Oct 2017	0445S_SW333_0.05_171017	Normal	ES1726190	*0.444*	0.0136	**0.577**		0.0148	0.0162	0.133	0.0090	<0.0020	<0.002	0.0042	0.0360		0.0060	0.0028	<0.0020	<0.0020
	17 Nov 2021	0445_SW333_211117	Normal	EM2122998	*0.44*	0.03	**0.84**		0.07	0.05	0.40	<0.02	<0.02	<0.1	0.07	0.13		<0.02	<0.02	<0.02	<0.02
	04 May 2022	0445_SW333_220504	Normal	EM2208381	*0.11*	<0.01	**0.13**		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	14 Oct 2022	0445_SW333_221014	Normal	EM2220286	*0.41*	0.01	**0.58**		0.03	<0.02	0.17	<0.02	<0.02	<0.1	<0.02	0.05		<0.02	<0.02	<0.02	<0.02
	03 May 2023	0445_SW333_230503	Normal	EM2308015	*0.12*	<0.01	**0.16**		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	28 Nov 2023	0445_SW333_231128	Normal	EM2321318	*0.52*	0.02	**0.69**		0.05	<0.02	0.17	<0.02	<0.02	<0.1	0.03	0.06		<0.02	<0.02	<0.02	<0.02
	31 May 2024	0445_SW333_240531	Normal	EM2409333	*0.18*	<0.01	**0.30**		0.04	<0.02	0.12	<0.02	<0.02	<0.1	0.02	0.05	0.02	<0.02	<0.02	<0.02	<0.02
SW336	18 Oct 2017	0445S_QC167_171018	Field_D	ES1726433	*17.6*	**0.850**	*19.8*		0.172	0.288	2.18	0.298	0.0452	0.044	0.352	1.93		0.324	0.347	0.137	0.0148
		0445S_QC267_171018	Interlab_D	569078	*48*	**1.2**	*50.7*		0.22	0.34	2.7	0.40	0.009	0.32	0.75	2.8		0.44	0.47	0.34	0.058
		0445S_SW336_0.1_171018	Normal	ES1726433	*17.2*	**0.899**	*19.6*		0.178	0.306	2.45	0.310	0.0396	0.055	0.446	2.30		0.382	0.348	0.136	0.0128
	15 Nov 2021	0445_SW336_211115	Normal	EM2122998	*7.29*	0.20	*7.71*		0.06	0.05	0.42	0.05	0.19	<0.1	0.10	0.26		0.10	0.15	0.16	0.10
	04 May 2022	0445_SW336_220504	Normal	EM2208381	*7.64*	0.35	*8.18*		0.14	0.11	0.54	0.04	0.96	<0.2	0.44	0.95		0.25	0.16	0.14	0.23
	14 Oct 2022	0445_QC106_20221014	Field_D	EM2220286	*4.70*	0.17	*5.21*		0.05	0.05	0.51	0.08	0.07	<0.1	0.09	0.21		0.08	0.06	0.07	0.03
		0445_QC206_221014	Interlab_D	932350	*6.8*	0.25	*7.6*	0.13	0.07	0.07	0.80	0.15	0.08	0.06	0.14	0.30	0.02	0.11	0.07	0.09	0.03
		0445_SW336_221014	Normal	EM2220286	*5.98*	0.19	*6.63*		0.05	0.07	0.65	0.10	0.09	<0.1	0.10	0.23		0.08	0.06	0.08	0.04
	04 May 2023	0445_SW336_230504	Normal	EM2308015	*4.78*	**0.57**	*5.93*		0.10	0.19	1.15	0.07	0.10	0.2	0.35	0.93		0.31	0.21	0.11	0.05
	27 Oct 2023	0445_SW336_20231027	Normal	EM2319356	*13.8*	**1.17**	*15.9*		0.22	0.23	2.08	0.20	0.44	0.3	0.71	1.77		0.55	0.42	0.28	0.13
SW338	18 Oct 2017	0445S_SW338_0.2_171018	Normal	ES1726433	*3.94*	0.224	*5.28*		0.202	0.210	1.34	0.111	0.0042	0.024	0.179	0.806		0.0998	0.0276	0.0048	<0.0020
	10 Nov 2021	0445_SW338_211109	Normal	EM2122518	*1.06*	0.05	**1.31**		0.09	0.03	0.25	<0.02	<0.02	<0.1	0.04	0.16		0.02	<0.02	<0.02	<0.02
	04 May 2022	0445_SW338_220504	Normal	EM2208381	*0.76*	0.04	**1.00**		0.03	0.03	0.24	<0.02	<0.02	<0.1	0.04	0.11		<0.02	<0.02	<0.02	<0.02
	14 Oct 2022	0445_QC207_221014	Interlab_D	932350	*0.81*	0.04	**1.03**	<0.01	0.03	0.03	0.22	0.01	<0.01	<0.05	0.04	0.12	0.01	0.02	<0.01	<0.01	<0.01
		0445_SW338_221014	Normal	EM2220286	*0.53*	0.03	**0.70**		0.03	0.02	0.17	<0.02	<0.02	<0.1	0.03	0.10		<0.02	<0.02	<0.02	<0.02
	02 May 2023	0445_QC102_230502	Field_D	EM2308015	*0.55*	0.03	**0.75**		0.03	0.03	0.20	<0.02	<0.02	<0.1	0.03	0.11		<0.02	<0.02	<0.02	<0.02
		0445_QC202_230502	Interlab_D	987797	*0.72*	0.04	**0.91**		0.03	0.03	0.19	0.01	<0.01	<0.05	0.03	0.10	<0.01	0.02	<0.01	<0.01	<0.01
		0445_SW338_230502	Normal	EM2308015	*0.53*	0.03	**0.71**		0.03	0.02	0.18	<0.02	<0.02	<0.1	0.03	0.10		<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_SW338_20231025	Normal	EM2319356	*0.98*	0.04	**1.20**		0.04	0.03	0.22	<0.02	<0.02	<0.1	0.05	0.13		0.02	<0.02	<0.02	<0.02
	02 Apr 2024	0445_SW338_240402	Normal	EM2405446	*0.60*	0.04	**0.81**		0.02	0.03	0.21	<0.02	<0.02	<0.1	0.04	0.13		0.02	<0.02	<0.02	<0.02

					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**														
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*														
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220															
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*															
Location Code	Date	Field ID	Sample Type	Lab Report Number																	
SW340	18 Oct 2017	0445S_SW340_0.03_171018	Normal	ES1726433	*5.59*	0.333	*6.80*		0.134	0.158	1.21	0.0960	0.0332	0.039	0.258	0.488		0.236	0.0956	0.0496	0.0144
	10 Nov 2021	0445_SW340_211109	Normal	EM2122518	*4.20*	0.15	*5.86*		0.26	0.21	1.66	0.11	<0.02	0.2	0.28	0.44		0.10	<0.02	<0.02	<0.02
	14 Oct 2022	0445_QC108_20221014	Field_D	EM2220286	*0.70*	0.05	**0.91**		0.02	0.02	0.21	<0.02	<0.02	<0.1	0.03	0.06		0.03	0.02	<0.02	<0.02
		0445_QC208_221014	Interlab_D	932350	*1.3*	0.06	**1.59**	<0.01	0.03	0.03	0.29	0.02	<0.01	<0.05	0.05	0.09	0.01	0.04	0.03	0.02	<0.01
		0445_SW340_221014	Normal	EM2220286	*0.76*	0.05	**0.98**		0.02	0.02	0.22	<0.02	<0.02	<0.1	0.03	0.07		0.03	0.02	<0.02	<0.02
	02 May 2023	0445_SW340_230502	Normal	EM2308015	*1.20*	0.09	**1.50**		<0.02	0.03	0.30	0.02	<0.02	<0.1	0.03	0.08		0.07	0.03	<0.02	<0.02
	25 Oct 2023	0445_SW340_20231025	Normal	EM2319356	*2.01*	0.16	*2.49*		0.04	0.04	0.48	0.02	<0.02	<0.1	0.14	0.18		0.12	0.06	0.04	<0.02
	31 May 2024	0445_QC102_240531	Field_D	EM2409333	*1.84*	0.14	*2.30*		0.05	0.04	0.46	0.03	<0.02	<0.1	0.12	0.19	<0.02	0.14	0.04	0.04	<0.02
		0445_QC202_240531	Interlab_D	1105323	*2.4*	0.15	*2.89*		0.05	0.05	0.49	0.03	0.01	0.10	0.14	0.21	0.02	0.16	0.06	0.05	0.02
		0445_SW340_240531	Normal	EM2409333	*1.84*	0.13	*2.30*		0.06	0.04	0.46	0.03	<0.02	<0.1	0.12	0.19	<0.02	0.13	0.04	0.03	<0.02
SW346	12 Oct 2017	0445S_SW346_0.2_171013	Normal	ES1725991	*1.42*	0.0634	**1.95**		0.0841	0.0844	0.526	0.0294	<0.0005	<0.002	0.110	0.150		0.0496	0.0206	0.0068	0.0014
	17 Nov 2021	0445_SW346_211117	Normal	EM2122998	*0.73*	0.04	**0.94**		0.04	0.03	0.21	<0.02	<0.02	<0.1	0.07	0.08		0.03	<0.02	<0.02	<0.02
	04 May 2022	0445_SW346_220504	Normal	EM2208381	*0.69*	0.04	**0.86**		0.04	<0.02	0.17	<0.02	<0.02	<0.1	0.04	0.05		0.02	<0.02	<0.02	<0.02
	14 Oct 2022	0445_SW346_221014	Normal	EM2220286	*0.77*	0.04	**1.07**		0.05	0.04	0.30	0.02	<0.02	<0.1	0.05	0.08		0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_SW346_230505	Normal	EM2308015	*0.67*	0.03	**0.83**		0.03	0.02	0.16	<0.02	<0.02	<0.1	0.05	0.06		0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_SW346_20231025	Normal	EM2319356	*1.14*	0.06	**1.50**		0.08	0.04	0.36	0.02	<0.02	<0.1	0.09	0.11		0.04	0.02	<0.02	<0.02
	02 Apr 2024	0445_SW346_240402	Normal	EM2405446	*0.76*	0.05	**1.03**		0.05	0.04	0.27	<0.02	<0.02	<0.1	0.08	0.10		0.03	<0.02	<0.02	<0.02
SW349	12 Oct 2017	0445S_QC159_171012	Field_D	ES1725991	*0.854*	0.0616	**1.33**		0.112	0.0908	0.479	0.0227	<0.0005	<0.002	0.124	0.166		0.0475	0.0164	0.0033	0.0009
	13 Oct 2017	0445S_SW349_0.5_171013	Normal	ES1725991	*0.950*	0.0476	**1.51**		0.104	0.0845	0.560	0.0216	<0.0005	<0.002	0.112	0.150		0.0399	0.0120	0.0026	0.0007
	15 Nov 2021	0445_QC206_211115	Interlab_D	842787	*0.84*	0.05	**1.06**	<0.01	0.04	0.03	0.22	0.01	<0.01	0.08	0.07	0.10	0.03	0.03	0.01	<0.01	<0.01
		0445_QC106_211115	Field_D	EM2122998	*0.55*	0.04	**0.73**		0.05	0.02	0.18	<0.02	<0.02	<0.1	0.06	0.08		0.02	<0.02	<0.02	<0.02
		0445_SW349_211115	Normal	EM2122998	*0.61*	0.04	**0.82**		0.04	0.03	0.21	<0.02	<0.02	<0.1	0.06	0.08		0.02	<0.02	<0.02	<0.02
	04 May 2022	0445_SW349_220504	Normal	EM2208381	*0.48*	0.02	**0.61**		0.03	<0.02	0.13	<0.02	<0.02	<0.1	0.04	0.04		<0.02	<0.02	<0.02	<0.02
	14 Oct 2022	0445_SW349_221014	Normal	EM2220286	*0.47*	0.03	**0.63**		0.03	0.02	0.16	<0.02	<0.02	<0.1	0.04	0.05		<0.02	<0.02	<0.02	<0.02
	02 May 2023	0445_SW349_230502	Normal	EM2308015	*0.46*	0.02	**0.59**		0.03	<0.02	0.13	<0.02	<0.02	<0.1	0.03	0.04		<0.02	<0.02	<0.02	<0.02
	23 Oct 2023	0445_QC100_20231023	Field_D	EM2319356	*0.64*	0.04	**0.85**		0.04	0.02	0.21	<0.02	<0.02	<0.1	0.06	0.08		0.03	<0.02	<0.02	<0.02
		0445_QC200_20231023	Interlab_D	1039507	*0.63*	0.03	**0.79**		0.03	0.02	0.16	<0.01	<0.01	<0.05	0.04	0.06	0.01	0.02	<0.01	<0.01	<0.01
		0445_SW349_20231023	Normal	EM2319356	*0.67*	0.04	**0.86**		0.03	0.03	0.19	<0.02	<0.02	<0.1	0.05	0.08		0.03	<0.02	<0.02	<0.02
	02 Apr 2024	0445_QC101_240402	Field_D	EM2405446	*0.82*	0.05	**1.09**		0.05	0.03	0.27	<0.02	<0.02	<0.1	0.08	0.10		0.04	<0.02	<0.02	<0.02
		0445_QC201_240402	Interlab_D	1086312	*0.99*	0.06	**1.21**		0.05	0.03	0.22	0.02	<0.01	<0.05	0.09	0.11	0.03	0.04	0.02	<0.01	<0.01
		0445_SW349_240402	Normal	EM2405446	*0.83*	0.05	**1.10**		0.05	0.04	0.27	<0.02	<0.02	<0.1	0.08	0.10		0.04	<0.02	<0.02	<0.02
SW355	13 Oct 2017	0445S_SW355_0.5_171013	Normal	ES1725991	*0.325*	0.0133	**0.533**		0.143	0.0294	0.208	0.0065	<0.0005	<0.002	0.0279	0.0420		0.0111	0.0039	0.0013	<0.0005
	17 Nov 2021	0445_QC107_211117	Field_D	EM2122998	*0.21*	0.02	**0.29**		<0.02	<0.02	0.08	<0.02	<0.02	<0.1	0.02	0.03		<0.02	<0.02	<0.02	<0.02
		0445_QC207_211117	Interlab_D	842787	*0.29*	0.02	**0.39**	<0.01	0.02	0.01	0.10	<0.01	<0.01	<0.05	0.03	0.04	<0.01	0.01	<0.01	<0.01	<0.01
		0445_SW355_211117	Normal	EM2122998	*0.22*	0.01	**0.30**		<0.02	<0.02	0.08	<0.02	<0.02	<0.1	0.02	0.03		<0.02	<0.02	<0.02	<0.02
	04 May 2022	0445_QC204_220504	Interlab_D	886780	*0.27*	<0.01	**0.32**	<0.01	0.01	<0.01	0.05	<0.01	<0.01	<0.05	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
		0445_SW355_220504	Normal	EM2208381	*0.11*	<0.01	**0.13**		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
		0445_QC104_220504	Field_D	EM2208381	*0.19*	0.01	**0.24**		<0.02	<0.02	0.05	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	14 Oct 2022	0445_SW355_221014	Normal	EM2220286	*0.21*	<0.01	**0.28**		<0.02	<0.02	0.07	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_SW355_230504	Normal	EM2308015	*0.13*	<0.01	**0.17**		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	23 Oct 2023	0445_QC101_20231023	Field_D	EM2319356	*0.22*	<0.01	**0.28**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	0.02		<0.02	<0.02	<0.02	<0.02
		0445_QC201_20231023	Interlab_D	1039507	*0.16*	<0.01	**0.21**		0.01	<0.01	0.05	<0.01	<0.01	<0.05	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
		0445_SW355_20231023	Normal	EM2319356	*0.21*	0.01	**0.27**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	02 Apr 2024	0445_SW355_240403	Normal	EM2405446	*0.22*	<0.01	**0.28**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	0.02		<0.02	<0.02	<0.02	<0.02
SW370	23 Oct 2017	0445N_SW370_0.01_171023	Normal	ES1726698	*0.166*	0.0213	**0.326**		0.0255	0.0591	0.160	0.0121	<0.0005	0.018	0.0284	0.0307		0.0176	0.0069	0.0018	<0.0005
	17 Nov 2021	0445_SW370_211117	Normal	EM2122998	*0.22*	0.01	**0.30**		<0.02	<0.02	0.08	<0.02	<0.02	<0.1	<0.02	0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_SW370_220506	Normal	EM2208381	*0.10*	<0.01	**0.13**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	15 Oct 2022	0445_QC109_20221015	Field_D	EM2220286	*0.14*	<0.01	**0.20**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
		0445_QC209_221015	Interlab_D	932350	*0.19*	<0.01	**0.27**	<0.01	<0.01	<0.01	0.08	<0.01	<0.01	<0.05	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
		0445_SW370_221015	Normal	EM2220286	*0.14*	<0.01	**0.20**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_SW370_230504	Normal	EM2308015	*0.09*	<0.01	**0.12**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_SW370_20231026	Normal	EM2319356	*0.11*	<0.01	**0.16**		<0.02	<0.02	0.05	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW374	23 Oct 2017	0445N_SW374_0.1_171023	Normal	ES1726698	*0.201*	0.0228	**0.340**		0.0293	0.0378	0.139	0.0108	<0.0005	<0.002	0.0294	0.0324		0.0156	0.0057	0.0010	<0.0005
	17 Nov 2021	0445_SW374_211117	Normal	EM2122998	*0.13*	<0.01	**0.17**		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_SW374_220506	Normal	EM2208381	*0.05*	<0.01	0.07		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	15 Oct 2022	0445_SW374_221014	Normal	EM2220286	*0.08*	<0.01	**0.12**		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_SW374_230505	Normal	EM2308015	*0.08*	<0.01	**0.10**		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_SW374_20231026	Normal	EM2319356	*0.09*	<0.01	**0.13**		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_SW374_240404	Normal	EM2405446	*0.06*	<0.01	**0.09**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02

					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoro undecanoic acid (PFUnDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**														
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*														
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220															
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*															
Location Code	Date	Field ID	Sample Type	Lab Report Number																	
SW375	23 Oct 2017	0445N_QC128_171023	Field_D	ES1726698	*0.166*	0.0190	**0.294**		0.0274	0.0267	0.128	0.0089	<0.0005	0.019	0.0232	0.0267		0.0156	0.0046	<0.0005	<0.0005
		0445N_QC228_171023	Interlab_D	569535	*0.19*	0.015	**0.29**		0.021	0.013	0.10	0.003	<0.001	0.019	0.035	0.039		0.012	0.003	0.001	<0.001
		0445N_SW375_0.1_171023	Normal	ES1726698	*0.150*	0.0197	**0.270**		0.0227	0.0245	0.120	0.0092	<0.0005	0.015	0.0253	0.0317		0.0162	0.0046	0.0012	<0.0005
	01 Aug 2018	0445_QC105_180801	Field_D	ES1823003	*0.0623*	0.0075	**0.104**		0.0068	0.0038	0.0415	0.0019	<0.0005	<0.002	<0.0005	0.0089		0.0053	0.0014	<0.0005	<0.0005
		0445_QC205_180801	Interlab_D	611290	*0.070*	0.006	**0.101**		0.004	0.003	0.031	0.002	<0.001	0.006	0.005	0.012		0.005	0.001	<0.001	<0.001
		0445_SW375_0.2_180801	Normal	ES1823003	*0.0644*	0.0074	**0.106**		0.0046	0.0029	0.0419	0.0016	<0.0005	<0.002	0.0025	0.0101		0.0076	0.0014	<0.0005	<0.0005
	17 Nov 2021	0445_SW375_211117	Normal	EM2122998	*0.09*	<0.01	**0.15**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_SW375_220506	Normal	EM2208381	*0.06*	<0.01	**0.08**		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_SW375_221012	Normal	EM2220286	*0.05*	<0.01	**0.08**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_SW375_230505	Normal	EM2308015	*0.05*	<0.01	0.07		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_SW375_20231026	Normal	EM2319356	*0.09*	<0.01	**0.12**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_QC110_240404	Field_D	EM2405446	*0.05*	<0.01	**0.08**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
		0445_QC210_240404	Interlab_D	1086312	*0.07*	<0.01	**0.09**		<0.01	<0.01	0.02	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		0445_SW375_240404	Normal	EM2405446	*0.05*	<0.01	0.07		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW379	16 Nov 2021	0445_SW379_21116	Normal	EM2122998	*0.41*	0.02	**0.58**		0.15	0.04	0.17	<0.02	0.02	0.1	0.07	0.09		<0.02	<0.02	<0.02	<0.02
	14 Oct 2022	0445_SW379_221014	Normal	EM2220286	*0.12*	<0.01	**0.15**		0.03	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	0.02		<0.02	<0.02	<0.02	<0.02
SW380	10 Nov 2021	0445_SW380_211108	Normal	EM2122518	*0.34*	<0.01	**0.43**		0.06	0.02	0.09	<0.02	<0.02	<0.1	<0.02	0.08		<0.02	<0.02	<0.02	<0.02
	14 Oct 2022	0445_SW380_221014	Normal	EM2220286	*0.18*	<0.01	**0.20**		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2023	0445_SW380_230506	Normal	EM2308015	*0.10*	<0.01	**0.11**		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW382	24 Oct 2017	0445E_QC131_171024	Field_D	ES1726816	*0.101*	0.0039	**0.120**		0.0066	0.0043	0.0187	0.0026	<0.0005	<0.002	0.0064	0.0155		0.0028	0.0008	0.0013	<0.0005
		0445E_SW382_0.1_171024	Normal	ES1726816	*0.107*	0.0042	**0.130**		0.0074	0.0046	0.0225	0.0026	<0.0005	<0.002	0.0061	0.0157		0.0028	0.0008	0.0013	<0.0005
	16 Nov 2021	0445_QC109_211116	Field_D	EM2122998	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
		0445_QC209_211116	Interlab_D	842787	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		0445_SW382_211116	Normal	EM2122998	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	03 May 2022	0445_SW382_220503	Normal	EM2208381	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	13 Oct 2022	0445_SW382_221013	Normal	EM2220286	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_SW382_230505	Normal	EM2308015	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_QC104_20231025	Field_D	EM2319356	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
		0445_QC204_20231025	Interlab_D	1039507	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		0445_SW382_20231025	Normal	EM2319356	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_QC106_240404	Field_D	EM2405446	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	0.02		<0.02	<0.02	<0.02	<0.02
		0445_QC206_240404	Interlab_D	1086312	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	0.02	0.02	<0.01	0.01	<0.01	<0.01	<0.01
		0445_SW382_240404	Normal	EM2405446	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	0.02		<0.02	<0.02	<0.02	<0.02
SW387	25 Oct 2017	0445E_SW387_0.2_171025	Normal	ES1726955	*0.0530*	0.0038	**0.157**		0.0273	0.0157	0.104	0.0045	<0.0005	<0.002	0.0030	0.0074		0.0021	0.0005	0.0006	<0.0005
	16 Nov 2021	0445_SW387_211116	Normal	EM2122998	*0.06*	<0.01	**0.21**		0.03	<0.02	0.15	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	03 May 2022	0445_QC101_220503	Field_D	EM2208381	*0.04*	<0.01	**0.12**		<0.02	<0.02	0.08	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
		0445_QC201_220503	Interlab_D	886780	*0.04*	<0.01	**0.1**	<0.01	0.01	<0.01	0.06	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		0445_SW387_220503	Normal	EM2208381	*0.05*	<0.01	**0.10**		<0.02	<0.02	0.05	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_SW387_221012	Normal	EM2220286	*0.13*	<0.01	**0.26**		<0.02	<0.02	0.13	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2023	0445_SW387_230506	Normal	EM2308015	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	27 Oct 2023	0445_SW387_20231027	Normal	EM2319356	*0.14*	<0.01	**0.29**		0.04	<0.02	0.15	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	05 Apr 2024	0445_SW387_240405	Normal	EM2405446	*0.12*	<0.01	**0.33**		0.02	0.02	0.21	<0.02	<0.02	<0.1	<0.02	0.03		<0.02	<0.02	<0.02	<0.02
SW388	25 Oct 2017	0445E_SW388_0.2_171025	Normal	ES1726955	*0.175*	0.0046	**0.343**		0.0326	0.0200	0.168	0.0054	<0.0020	<0.002	<0.0020	0.0102		<0.0020	<0.0020	<0.0020	<0.0020
	16 Nov 2021	0445_SW388_211116	Normal	EM2122998	*0.28*	<0.01	**0.48**		0.04	<0.02	0.20	<0.02	<0.02	<0.1	<0.02	0.02		<0.02	<0.02	<0.02	<0.02
	16 May 2022	0445S_SW388_220516	Normal	EM2209833	*0.25*	0.02	**0.84**		0.1	0.07	0.59	<0.02	<0.02	<0.1	<0.02	0.04		<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_SW388_221210	Normal	EM2220286	*0.07*	<0.01	**0.12**		<0.02	<0.02	0.05	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW390	13 Oct 2017	0445_SW390_0.5_171013	Normal	ES1725997	*0.0006*	<0.0005	0.0006		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	31 Jul 2018	0445_SW390_0.5_180731	Normal	ES1823003	<0.0003	<0.0005	<0.0003		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	26 Nov 2018	0445_SW390_0.5_181126	Normal	ES1835585	*0.0005*	<0.0005	0.0010		<0.0005	<0.0005	0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	09 Nov 2021	0445_SW390_211109	Normal	EM2122518	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	05 May 2022	0445_SW390_220505	Normal	EM2208383	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	11 Oct 2022	0445_SW390_221011	Normal	EM2220271	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_SW390_230504	Normal	EM2308009	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	27 Oct 2023	0445_SW390_20231027	Normal	EM2319354	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	05 Apr 2024	0445_SW390_240405	Normal	EM2405435	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02

					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**														
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*														
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220															
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*															
Location Code	Date	Field ID	Sample Type	Lab Report Number																	
SW393	16 Oct 2017	0445_SW393_0.1_171016	Normal	ES1726004	*0.0009*	<0.0005	0.0009		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	01 Aug 2018	0445_SW393_0.2_180801	Normal	ES1823003	<0.0003	<0.0005	<0.0003		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	26 Nov 2018	0445_SW393_0.2_181127	Normal	ES1835585	*0.0009*	<0.0005	0.0009		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	16 Nov 2021	0445_SW393_211116	Normal	EM2122999	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_SW393_220506	Normal	EM2208383	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	10 Nov 2022	0445_SW393_221110	Normal	EM2222367	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_SW393_230504	Normal	EM2308009	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_SW393_20231025	Normal	EM2319354	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	05 Apr 2024	0445_SW393_240405	Normal	EM2405435	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW395	09 Oct 2017	0445_QC153_171009	Field_D	ES1725705	*0.0737*	0.0022	**0.196**		0.0274	0.0154	0.122	0.0025	<0.0005	<0.002	<0.0005	0.0067		0.0007	<0.0005	<0.0005	<0.0005
		0445_QC253_171010	Interlab_D	567888	*0.094*	0.004	**0.214**		0.018	0.020	0.12	0.003	<0.001	0.005	0.002	0.006		0.002	<0.001	<0.001	<0.001
		0445_SW395_0.5_171010	Normal	ES1725705	*0.0925*	0.0022	**0.224**		0.0296	0.0164	0.132	0.0034	<0.0005	<0.002	<0.0005	0.0088		0.0010	<0.0005	<0.0005	<0.0005
	03 Nov 2019	0445_SW395_0.5_191103	Normal	ES1936497	*0.0688*	0.0036	**0.126**		0.0092	0.0072	0.0570	0.0038	<0.0020	<0.002	<0.0020	0.0052		0.0022	<0.0020	<0.0020	<0.0020
	16 Nov 2021	0445_SW395_211116	Normal	EM2122999	*0.09*	<0.01	**0.19**		0.03	<0.02	0.10	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	09 May 2022	0445_SW395_220509	Normal	EM2208629	*0.04*	<0.01	**0.10**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	10 Nov 2022	0445_SW395_221110	Normal	EM2222367	*0.18*	<0.01	**0.38**		0.03	0.02	0.20	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2023	0445_SW395_230506	Normal	EM2308009	*0.03*	<0.01	0.06		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	27 Oct 2023	0445_SW395_20231027	Normal	EM2319354	*0.05*	<0.01	**0.10**		<0.02	<0.02	0.05	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	05 Apr 2024	0445_SW395_240405	Normal	EM2405435	*0.08*	<0.01	**0.15**		<0.02	<0.02	0.07	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW396	10 Oct 2017	0445_SW396_0.5_171010	Normal	ES1725715	*0.434*	0.0250	**1.91**		0.214	0.160	1.48	0.0256	<0.0005	<0.002	<0.0005	0.189		0.0182	<0.0005	<0.0005	<0.0005
	02 Aug 2018	0445_SW396_0.5_180802	Normal	ES1823005	*0.596*	0.0914	*2.24*		0.394	0.316	1.64	0.0643	<0.0005	<0.002	0.113	0.281		0.0901	<0.0005	<0.0005	<0.0005
	03 Nov 2019	0445_SW396_0.5_191103	Normal	ES1936497	*0.549*	0.0356	**1.66**		0.153	0.157	1.11	0.0488	<0.0020	<0.002	<0.0020	0.129		0.0182	<0.0020	<0.0020	<0.0020
	16 Nov 2021	0445_SW396_211116	Normal	EM2122968	*0.44*	0.04	**1.51**		0.16	0.11	1.07	0.03	<0.02	<0.1	0.04	0.13		<0.02	<0.02	<0.02	<0.02
	03 May 2022	0445_SW396_220503	Normal	EM2208382	*0.57*	0.05	*2.22*		0.21	0.19	1.65	0.05	<0.02	<0.1	0.06	0.17		0.04	<0.02	<0.02	<0.02
	12 Oct 2022	0445_SW396_221012	Normal	EM2220270	*0.42*	0.02	**1.10**		0.09	0.08	0.68	0.02	<0.02	<0.1	0.02	0.07		<0.02	<0.02	<0.02	<0.02
	06 May 2023	0445_SW396_ 230506	Normal	EM2308004	*0.49*	0.04	**1.63**		0.14	0.18	1.14	0.05	<0.02	<0.1	0.04	0.17		0.02	<0.02	<0.02	<0.02
	27 Oct 2023	0445_SW396_20231027	Normal	EM2319357	*0.67*	0.05	**1.97**		0.17	0.14	1.30	0.04	<0.02	<0.1	0.06	0.17		0.03	<0.02	<0.02	<0.02
SW397	10 Oct 2017	0445_SW397_0.5_171010	Normal	ES1725715	*5.74*	0.434	*12.8*		1.21	1.06	7.02	0.390	<0.0005	0.025	0.225	1.88		0.224	0.0019	<0.0005	<0.0005
		0445_SW397_1.0_171010	Normal	ES1725715	*5.38*	0.433	*12.3*		1.17	1.06	6.96	0.382	<0.0005	0.018	0.231	1.76		0.239	0.0013	<0.0005	<0.0005
		0445_SW397_1.3_171010	Normal	ES1725715	*5.61*	0.462	*12.7*		1.17	1.09	7.12	0.371	<0.0005	0.024	0.217	1.85		0.211	0.0019	<0.0005	<0.0005
	02 Aug 2018	0445_SW397_0.5_180802	Normal	ES1823005	*2.86*	0.361	*7.52*		0.608	0.821	4.66	0.307	<0.0005	0.054	0.191	0.932		0.157	0.0019	<0.0005	<0.0005
	26 Nov 2018	0445_QC125_181126	Field_D	ES1835587	*3.22*	0.336	*7.36*		0.696	0.544	4.14	0.263	<0.0005	0.051	0.222	1.05		0.191	0.0025	<0.0005	<0.0005
		0445_QC225_181126	Interlab_D	630629	*5.8*	0.47	*11*		0.87	1.3	5.6	0.37	<0.001	0.21	0.33	1.3		0.30	0.002	<0.001	<0.001
		0445_SW397_0.5_181126	Normal	ES1835587	*3.84*	0.362	*8.90*		0.773	0.711	5.06	0.282	<0.0005	0.051	0.236	1.14		0.206	0.0023	<0.0005	<0.0005
	03 Nov 2019	0445_QC135_191103	Field_D	ES1936497	*4.43*	0.383	*9.50*		0.801	1.05	5.07	0.394	<0.0020	0.077	0.289	1.19		0.215	0.0028	<0.0020	<0.0020
		0445_SW397_0.5_191103	Normal	ES1936497	*4.27*	0.348	*9.44*		0.738	0.980	5.17	0.364	<0.0020	0.079	0.259	1.08		0.191	0.0028	<0.0020	<0.0020
	16 Nov 2021	0445_SW397_211116	Normal	EM2122968	*3.32*	0.30	*6.64*		0.57	0.51	3.32	0.26	<0.02	0.2	0.23	0.72		0.19	<0.02	<0.02	<0.02
	03 May 2022	0445_SW397_220503	Normal	EM2208382	*3.99*	0.34	*8.31*		0.64	0.68	4.32	0.30	<0.02	0.1	0.27	0.87		0.20	<0.02	<0.02	<0.02
	12 Oct 2022	0445_SW397_221012	Normal	EM2220270	*3.23*	0.24	*6.53*		0.50	0.51	3.30	0.24	<0.02	<0.1	0.18	0.75		0.14	<0.02	<0.02	<0.02
	06 May 2023	0445_SW397_ 230506	Normal	EM2308004	*2.79*	0.28	*6.20*		0.58	0.62	3.41	0.24	<0.02	0.1	0.20	0.87		0.16	<0.02	<0.02	<0.02
	25 Oct 2023	0445_SW397_20231025	Normal	EM2319357	*3.09*	0.26	*6.79*		0.52	0.54	3.70	0.24	<0.02	<0.1	0.21	0.84		0.16	<0.02	<0.02	<0.02
	05 Apr 2024	0445_SW397_240405	Normal	EM2405437	*4.31*	0.36	*8.92*		0.69	0.72	4.61	0.32	<0.02	0.2	0.26	1.08		0.20	<0.02	<0.02	<0.02
SW398	12 Oct 2017	0445_SW398_0.5_171012	Normal	ES1725997	*0.0009*	<0.0005	0.0009		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	01 Aug 2018	0445_SW398_0.5_180801	Normal	ES1823003	<0.0003	<0.0005	<0.0003		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	26 Nov 2018	0445_SW398_0.5_181126	Normal	ES1835585	*0.0004*	<0.0005	0.0004		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	16 Nov 2021	0445_SW398_211116	Normal	EM2122999	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	03 May 2022	0445_SW398_220503	Normal	EM2208383	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_SW398_221012	Normal	EM2220270	*0.04*	<0.01	**0.08**		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2023	0445_SW398_230506	Normal	EM2308009	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	27 Oct 2023	0445_SW398_20231027	Normal	EM2319354	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	05 Apr 2024	0445_SW398_240405	Normal	EM2405435	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW400	10 Oct 2017	0445_SW400_0.3_171010	Normal	ES1725715	*0.178*	0.0225	**0.826**		0.164	0.103	0.648	0.0164	<0.0005	<0.002	0.0082	0.119		0.0150	<0.0005	<0.0005	<0.0005
	02 Aug 2018	0445_QC106_180802	Field_D	ES1823005	*0.0992*	0.0103	**0.228**		0.0340	0.0310	0.129	0.0084	<0.0005	<0.002	<0.0005	0.0179		0.0063	0.0007	<0.0005	<0.0005
		0445_QC206_180802	Interlab_D	611294	*0.15*	0.012	**0.35**		0.027	0.034	0.20	0.012	<0.001	0.007	0.004	0.028		0.006	<0.001	0.001	0.002
		0445_SW400_0.2_180802	Normal	ES1823005	*0.113*	0.0118	**0.283**		0.0237	0.0283	0.170	0.0097	<0.0005	<0.002	0.0063	0.0240		0.0046	<0.0005	<0.0005	<0.0005
	03 Nov 2019	0445_SW400_0.2_191103	Normal	ES1936497	*0.110*	0.0084	**0.246**		0.0232	0.0218	0.136	0.0066	<0.0020	<0.002	<0.0020	0.0172		0.0032	<0.0020	<0.0020	<0.0020
	16 Nov 2021	0445_SW400_211116	Normal	EM2122968	*0.70*	0.06	**1.51**		0.26	0.13	0.81	0.06	<0.02	<0.1	0.05	0.14		0.04	<0.02	<0.02	<0.02
	03 May 2022	0445_SW400_220503	Normal	EM2208382	*0.22*	0.02	**0.55**		0.07	0.05	0.33	<0.02	<0.02	<0.1	<0.02	0.06		<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_SW400_221012	Normal	EM2220270	*0.25*	0.02	**0.57**		0.06	0.05	0.32	0.02	<0.02	<0.1	<0.02	0.05		<0.02	<0.02	<0.02	<0.02
	06 May 2023	0445_SW400_ 230506	Normal	EM2308004	*0.14*	0.01	**0.32**		0.02	0.03	0.18	<0.02	<0.02	<0.1	<0.02	0.02		<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_SW400_20231025	Normal	EM2319357	*0.57*	0.06	**1.57**		0.17	0.14	1.00	0.05	<0.02	<0.1	0.06	0.20		0.04	<0.02	<0.02	<0.02
	05 Apr 2024	0445_SW400_240405	Normal	EM2405437	*0.58*	0.04	**1.49**		0.13	0.13	0.91	0.04	<0.02	<0.1	0.02	0.13		0.02	<0.02	<0.02	<0.02

					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**														
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*														
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220															
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*															
Location Code	Date	Field ID	Sample Type	Lab Report Number																	
SW401	10 Oct 2017	0445_SW401_0.4_171010	Normal	ES1725715	*0.179*	0.0229	**0.687**		0.143	0.0922	0.508	0.0138	<0.0005	<0.002	0.0087	0.118		0.0113	<0.0005	<0.0005	<0.0005
	03 Nov 2019	0445_SW401_0.2_191103	Normal	ES1936497	*0.0928*	0.0074	**0.217**		0.0238	0.0202	0.124	0.0060	<0.0020	<0.002	<0.0020	0.0142		0.0024	<0.0020	<0.0020	<0.0020
	16 Nov 2021	0445_SW401_211116	Normal	EM2122968	*0.32*	0.04	**0.85**		0.15	0.08	0.53	0.03	<0.02	<0.1	0.03	0.11		0.02	<0.02	<0.02	<0.02
	03 May 2022	0445_SW401_220503	Normal	EM2208382	*0.18*	0.02	**0.51**		0.07	0.06	0.33	<0.02	<0.02	<0.1	<0.02	0.06		<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_SW401_221012	Normal	EM2220270	*0.10*	<0.01	**0.26**		0.05	0.02	0.16	<0.02	<0.02	<0.1	<0.02	0.03		<0.02	<0.02	<0.02	<0.02
	06 May 2023	0445_SW401_ 230506	Normal	EM2308004	*0.11*	0.01	**0.33**		0.05	0.05	0.22	<0.02	<0.02	<0.1	<0.02	0.04		<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_SW401_20231025	Normal	EM2319357	*0.40*	0.04	**1.08**		0.13	0.10	0.68	0.03	<0.02	<0.1	0.04	0.13		0.03	<0.02	<0.02	<0.02
SW403	12 Oct 2017	0445_SW403_0.5_171012	Normal	ES1725997	*0.0532*	0.0063	**0.224**		0.0389	0.0325	0.171	0.0019	<0.0005	<0.002	<0.0005	0.0279		0.0041	<0.0005	<0.0005	<0.0005
	12 Nov 2021	0445_SW403_211112	Normal	EM2122519	*0.26*	0.02	**0.59**		0.09	0.07	0.33	<0.02	<0.02	<0.1	<0.02	0.07		<0.02	<0.02	<0.02	<0.02
	05 May 2022	0445_SW403_220505	Normal	EM2208383	*0.20*	0.02	**0.58**		0.11	0.08	0.38	<0.02	<0.02	<0.1	<0.02	0.05		<0.02	<0.02	<0.02	<0.02
	15 Oct 2022	0445_SW403_221015	Normal	EM2220271	*0.02*	<0.01	0.04		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_SW403_230505	Normal	EM2308009	*0.12*	<0.01	**0.25**		0.02	<0.02	0.13	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_SW403_20231025	Normal	EM2319354	*0.37*	0.04	**0.95**		0.12	0.12	0.58	0.03	<0.02	<0.1	0.03	0.14		0.02	<0.02	<0.02	<0.02
SW404	11 Oct 2017	0445_SW404_0.5_171011	Normal	ES1725716	*0.0006*	<0.0005	0.0006		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	0.0006		<0.0005	<0.0005	<0.0005	<0.0005
	01 Aug 2018	0445_SW404_0.5_180801	Normal	ES1823003	<0.0003	<0.0005	<0.0003		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	26 Nov 2018	0445_SW404_0.52_181126	Normal	ES1835585	*0.0025*	<0.0005	0.0025		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	12 Nov 2021	0445_SW404_211112	Normal	EM2122519	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	17 Nov 2021	0445_SW404_211117	Normal	EM2122998	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	05 May 2022	0445_SW404_220505	Normal	EM2208383	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	15 Oct 2022	0445_SW404_221015	Normal	EM2220271	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_SW404_230504	Normal	EM2308009	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	23 Oct 2023	0445_SW404_20231023	Normal	EM2319354	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	03 Apr 2024	0445_SW404_240403	Normal	EM2405435	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW405	12 Oct 2017	0445_SW405_0.2_171012	Normal	ES1725997	*0.0481*	0.0046	**0.230**		0.0386	0.0339	0.182	0.0016	<0.0005	<0.002	<0.0005	0.0214		0.0027	<0.0005	<0.0005	<0.0005
	02 Aug 2018	0445_SW405_0.1_180802	Normal	ES1823003	*0.0401*	0.0021	**0.0997**		0.0069	0.0053	0.0596	0.0022	<0.0005	<0.002	<0.0005	0.0013		0.0006	<0.0005	<0.0005	<0.0005
	12 Nov 2021	0445_SW405_211112	Normal	EM2122519	*0.16*	0.02	**0.51**		0.08	0.07	0.35	<0.02	<0.02	<0.1	<0.02	0.06		<0.02	<0.02	<0.02	<0.02
	05 May 2022	0445_SW405_220505	Normal	EM2208383	*0.08*	<0.01	**0.13**		<0.02	<0.02	0.05	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	15 Oct 2022	0445_SW405_221015	Normal	EM2220271	*0.02*	<0.01	0.04		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2023	0445_SW405_230506	Normal	EM2308009	*0.05*	<0.01	**0.11**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_SW405_20231025	Normal	EM2319354	*0.26*	0.03	**0.66**		0.08	0.07	0.40	<0.02	<0.02	<0.1	<0.02	0.09		<0.02	<0.02	<0.02	<0.02
SW409	14 Feb 2018	0445_SW409_0.0_180214	Normal	ES1805190	*0.0947*	0.0062	**0.115**		0.0026	0.0020	0.0204	0.0016	<0.0005	<0.002	0.0034	0.0048		0.0017	0.0009	0.0007	<0.0005
	12 Nov 2021	0445_SW409_211112	Normal	EM2122519	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_SW409_220506	Normal	EM2208383	*0.04*	<0.01	0.05		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	15 Oct 2022	0445_SW409_221015	Normal	EM2220271	*0.06*	<0.01	**0.09**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_SW409_230504	Normal	EM2308009	*0.04*	<0.01	0.04		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	24 Oct 2023	0445_SW409_20231023	Normal	EM2319354	*0.06*	<0.01	**0.09**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	03 Apr 2024	0445_SW409_240403	Normal	EM2405435	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW412	12 Oct 2017	0445_SW412_0.5_171012	Normal	ES1725997	*0.0482*	0.0037	**0.213**		0.0245	0.0201	0.165	0.0010	<0.0005	<0.002	<0.0005	0.0065		0.0025	0.0006	<0.0005	<0.0005
	02 Aug 2018	0445_SW412_0.1_180802	Normal	ES1823003	*0.0384*	0.0051	0.0674		0.0050	0.0022	0.0290	0.0011	<0.0005	<0.002	<0.0005	0.0064		0.0031	0.0010	<0.0005	<0.0005
	26 Nov 2018	0445_QC126_181126	Field_D	ES1835585	*0.0406*	0.0037	0.0588		0.0028	0.0020	0.0182	<0.0005	<0.0005	<0.002	0.0020	0.0064		0.0016	0.0009	0.0007	<0.0005
		0445_SW412_0.2_181126	Normal	ES1835585	*0.0383*	0.0036	0.0569		0.0026	0.0019	0.0186	<0.0005	<0.0005	<0.002	0.0019	0.0068		0.0014	0.0008	0.0007	<0.0005
	12 Nov 2021	0445_SW412_211112	Normal	EM2122519	*0.04*	<0.01	0.05		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_SW412_220506	Normal	EM2208383	*0.04*	<0.01	**0.11**		<0.02	<0.02	0.07	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	15 Oct 2022	0445_SW412_221015	Normal	EM2220271	*0.02*	<0.01	0.03		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	05 May 2023	0445_SW412_230505	Normal	EM2308009	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	26 Oct 2023	0445_SW412_20231026	Normal	EM2319354	*0.03*	<0.01	0.04		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_SW412_240404	Normal	EM2405435	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW416	11 Oct 2017	0445_SW416_0.5_171011	Normal	ES1725716	<0.0003	<0.0005	<0.0003		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	01 Aug 2018	0445_SW416_0.5_180801	Normal	ES1823003	<0.0003	<0.0005	<0.0003		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	26 Nov 2018	0445_SW416_0.5_181126	Normal	ES1835585	*0.0005*	<0.0005	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	12 Nov 2021	0445_SW416_211111	Normal	EM2122519	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	05 May 2022	0445_SW416_220505	Normal	EM2208383	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_SW416_221012	Normal	EM2220271	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_SW416_230504	Normal	EM2308009	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	24 Oct 2023	0445_SW416_20231024	Normal	EM2319354	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 Apr 2024	0445_SW416_240404	Normal	EM2405435	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02

					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoro undecanoic acid (PFUnDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**														
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*														
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220															
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*															
Location Code	Date	Field ID	Sample Type	Lab Report Number																	
SW424	11 Oct 2017	0445_QC213	Interlab_D	567942	*3.3*	0.13	*5.1*		0.16	0.22	1.8	0.10	<0.01	0.10	0.11	0.36		0.08	0.02	<0.01	<0.01
		0445_QC113	Field_D	ES1725716	*2.52*	0.0623	*4.85*		0.131	0.126	2.33	0.0687	<0.0005	0.011	0.0752	0.435		0.0445	0.0115	0.0016	0.0006
		0445_SW424_0.1_171011	Normal	ES1725716	*2.12*	0.0607	*4.14*		0.136	0.133	2.02	0.0714	<0.0005	0.010	0.0731	0.371		0.0429	0.0109	0.0013	<0.0005
	13 Oct 2017	0445_SW424_0.1_171013	Normal	ES1725997	*0.706*	0.0247	**1.33**		0.0590	0.0626	0.622	0.0142	<0.0005	<0.002	0.0475	0.103		0.0219	0.0060	0.0011	<0.0005
	15 Nov 2021	0445_QC208_211115	Interlab_D	842787	*1.1*	0.04	**1.83**	<0.01	0.03	0.05	0.73	0.03	<0.01	0.06	0.04	0.10	0.02	0.02	<0.01	<0.01	<0.01
		0445_SW424_211115	Normal	EM2122999	*0.76*	0.03	**1.16**		0.04	0.02	0.40	0.02	<0.02	<0.1	0.03	0.06		<0.02	<0.02	<0.02	<0.02
	07 May 2022	0445_SW424_220504	Normal	EM2208383	*0.80*	0.02	**1.28**		0.03	0.04	0.48	0.03	<0.02	<0.1	<0.02	0.05		<0.02	<0.02	<0.02	<0.02
	11 Oct 2022	0445_SW424_221011	Normal	EM2220271	*0.78*	0.01	**0.97**		0.02	<0.02	0.19	<0.02	<0.02	<0.1	<0.02	0.03		<0.02	<0.02	<0.02	<0.02
	02 May 2023	0445_SW424_230502	Normal	EM2308009	*0.84*	0.02	**1.30**		0.03	0.03	0.46	<0.02	<0.02	<0.1	0.02	0.06		<0.02	<0.02	<0.02	<0.02
	23 Oct 2023	0445_SW424_20231023	Normal	EM2319354	*1.14*	0.04	**1.70**		0.04	0.03	0.56	0.03	<0.02	<0.1	0.04	0.09		<0.02	<0.02	<0.02	<0.02
	05 Apr 2024	0445_SW424_240405	Normal	EM2405435	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW427	16 Oct 2017	0445_SW427_0.0_171016	Normal	ES1726004	*0.111*	0.0030	**0.133**		0.0045	0.0026	0.0222	0.0018	<0.0005	<0.002	0.0021	0.0046		0.0016	0.0009	0.0008	<0.0005
	15 Nov 2021	0445_SW427_211115	Normal	EM2122999	*0.19*	<0.01	**0.25**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_SW427_220506	Normal	EM2208383	*0.03*	<0.01	0.03		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	11 Oct 2022	0445_SW427_221011	Normal	EM2220271	*0.40*	0.01	**0.53**		<0.02	<0.02	0.13	<0.02	<0.02	<0.1	<0.02	0.02		<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_SW427_230504	Normal	EM2308009	*0.37*	0.01	**0.51**		<0.02	<0.02	0.14	<0.02	<0.02	<0.1	<0.02	0.02		<0.02	<0.02	<0.02	<0.02
	23 Oct 2023	0445_SW427_20231023	Normal	EM2319354	*0.11*	<0.01	**0.14**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	02 Apr 2024	0445_SW427_240402	Normal	EM2405435	*0.04*	<0.01	0.05		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW430	16 Oct 2017	0445_SW430_0.1_171016	Normal	ES1726004	*0.0465*	0.0036	0.0618		0.0010	0.0025	0.0153	0.0008	<0.0005	<0.002	<0.0005	0.0042		0.0015	0.0006	0.0006	<0.0005
	02 Aug 2018	0445_SW430_0.1_180802	Normal	ES1823003	*0.0199*	0.0039	0.0364		<0.0005	0.0011	0.0165	0.0005	<0.0005	<0.002	<0.0005	0.0042		0.0010	<0.0005	<0.0005	<0.0005
	16 Nov 2021	0445_SW430_211115	Normal	EM2122999	*0.10*	<0.01	**0.16**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_SW430_220506	Normal	EM2208383	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	11 Oct 2022	0445_SW430_221011	Normal	EM2220271	*0.13*	<0.01	**0.17**		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_SW430_230504	Normal	EM2308009	*0.13*	<0.01	**0.19**		<0.02	<0.02	0.06	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	23 Oct 2023	0445_SW430_20231023	Normal	EM2319354	*0.06*	<0.01	**0.08**		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	03 Apr 2024	0445_SW430_240403	Normal	EM2405435	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW431	16 Oct 2017	0445_SW431_0.1_171016	Normal	ES1726004	*0.0525*	0.0032	**0.0732**		<0.0005	0.0026	0.0207	0.0010	<0.0005	<0.002	<0.0005	0.0044		0.0013	0.0005	0.0005	<0.0005
	16 Nov 2021	0445_SW431_211116	Normal	EM2122999	*0.07*	<0.01	**0.10**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_SW431_220506	Normal	EM2208383	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	11 Oct 2022	0445_SW431_221011	Normal	EM2220271	*0.14*	<0.01	**0.19**		<0.02	<0.02	0.05	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	02 May 2023	0445_SW431_230502	Normal	EM2308009	*0.03*	<0.01	0.03		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	23 Oct 2023	0445_SW431_20231023	Normal	EM2319354	*0.04*	<0.01	0.05		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	03 Apr 2024	0445_SW431_240403	Normal	EM2405435	*0.04*	<0.01	0.04		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW432	16 Oct 2017	0445_SW432_0.1_171016	Normal	ES1726004	*0.0545*	0.0044	**0.0769**		<0.0005	0.0023	0.0224	0.0010	<0.0005	<0.002	<0.0005	0.0055		0.0019	0.0008	0.0008	<0.0005
	16 Nov 2021	0445_SW432_211116	Normal	EM2122999	*0.05*	<0.01	**0.08**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_SW432_220506	Normal	EM2208383	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	11 Oct 2022	0445_SW432_221011	Normal	EM2220271	*0.06*	<0.01	**0.09**		<0.02	<0.02	0.03	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_SW432_230504	Normal	EM2308009	*0.04*	<0.01	0.06		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	23 Oct 2023	0445_SW432_20231023	Normal	EM2319354	*0.06*	<0.01	**0.08**		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	03 Apr 2024	0445_SW432_240403	Normal	EM2405435	*0.03*	<0.01	0.03		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW434	09 Oct 2017	0445_SW434_0.5_171011	Normal	ES1725705	*0.0038*	<0.0005	0.0045		<0.0005	<0.0005	0.0007	<0.0005	<0.0005	<0.002	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
	15 Nov 2021	0445_SW434_211115	Normal	EM2122999	*0.05*	<0.01	0.07		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2022	0445_SW434_220506	Normal	EM2208383	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	11 Oct 2022	0445_SW434_221011	Normal	EM2220271	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	02 May 2023	0445_SW434_230502	Normal	EM2308009	*0.03*	<0.01	0.03		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_SW434_20231025	Normal	EM2319354	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	03 Apr 2024	0445_SW434_240403	Normal	EM2405435	<0.01	<0.01	<0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW448	20 Oct 2017	0445S_SW448_0.1_171020	Normal	ES1726682	*1.41*	0.0428	*2.38*		0.108	0.0448	0.965	0.104	<0.0005	0.015	0.179	0.111		0.0549	0.0207	0.0026	0.0042
	16 Nov 2021	0445_SW448_211115	Normal	EM2122998	*2.09*	0.07	*3.23*		0.06	0.05	1.14	0.04	<0.02	<0.1	0.12	0.25		0.03	<0.02	<0.02	<0.02
	14 Oct 2022	0445_SW448_221014	Normal	EM2220286	*0.31*	<0.01	**0.43**		<0.02	<0.02	0.12	<0.02	<0.02	<0.1	<0.02	0.03		<0.02	<0.02	<0.02	<0.02
	03 May 2023	0445_QC104_230503	Field_D	EM2308015	*1.28*	0.03	**1.88**		0.04	0.03	0.60	0.02	<0.02	<0.1	0.04	0.09		<0.02	<0.02	<0.02	<0.02
		0445_QC204_230503	Interlab_D	987797	*1.5*	0.03	*2.07*		0.03	0.03	0.57	0.02	<0.01	<0.05	0.04	0.08	0.02	0.02	<0.01	<0.01	<0.01
		0445_SW448_230503	Normal	EM2308015	*1.23*	0.03	**1.81**		0.04	0.03	0.58	<0.02	<0.02	<0.1	0.04	0.09		<0.02	<0.02	<0.02	<0.02
	02 Apr 2024	0445_SW448_240402	Normal	EM2405446	*2.56*	0.10	*4.37*		0.44	0.19	1.81	0.06	<0.02	0.2	0.72	0.63		0.05	<0.02	<0.02	<0.02

					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)
					µg/L	µg/L	µg/L	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR					0.0001	0.0005	0.0003	0.01	0.0005	0.0005	0.0005	0.0005	0.0005	0.002	0.0005	0.0005	0.02	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2.0 Table 1 Health Drinking Water						**0.56**	**0.07**														
PFAS NEMP 2.0 Table 1 Health Recreational Water						*10*	*2*														
PFAS NEMP 2.0 Table 5 Freshwater 95%					0.13	220															
PFAS NEMP 2.0 Table 5 Freshwater 99%					*0.00023*	*19*															
Location Code	Date	Field ID	Sample Type	Lab Report Number																	
SW462	23 Nov 2017	0445_SW462_0.1_171123	Normal	ES1729741	*0.0617*	0.0059	**0.117**		0.0122	0.0159	0.0552	0.0044	<0.0005	<0.002	<0.0005	0.0123		0.0031	0.0011	0.0006	<0.0005
	01 Aug 2018	0445_SW462_0.2_180801	Normal	ES1823003	*0.0265*	0.0035	0.0481		<0.0005	0.0017	0.0216	0.0008	<0.0005	<0.002	<0.0005	0.0045		0.0016	0.0006	<0.0005	<0.0005
	11 Nov 2021	0445_SW462_211111	Normal	EM2122518	*0.08*	<0.01	**0.19**		0.03	0.02	0.11	<0.02	<0.02	<0.1	<0.02	0.02		<0.02	<0.02	<0.02	<0.02
	05 May 2022	0445_QC205_220505	Interlab_D	886780	*0.04*	<0.01	0.06	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		0445_SW462_220505	Normal	EM2208383	*0.03*	<0.01	0.05		<0.02	<0.02	0.02	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
		0445_QC105_220505	Field_D	EM2208383	*0.02*	<0.01	0.03		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	11 Oct 2022	0445_SW462_221011	Normal	EM2220271	<0.01	<0.01	0.01		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 May 2023	0445_SW462_230504	Normal	EM2308009	*0.04*	<0.01	0.05		<0.02	<0.02	0.01	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	24 Oct 2023	0445_SW462_20231024	Normal	EM2319354	*0.16*	0.02	**0.42**		0.05	0.05	0.26	<0.02	<0.02	<0.1	<0.02	0.06		<0.02	<0.02	<0.02	<0.02
	31 May 2024	0445_SW462_240531	Normal	EM2409333	*0.02*	<0.01	0.02		<0.02	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
SW463	11 Dec 2017	0445_SW463_0.1_171211	Normal	ES1731468	*0.540*	0.119	**1.03**		0.0266	0.0392	0.490	0.0108	<0.0005	<0.002	0.0448	0.206		0.0173	<0.0005	<0.0005	<0.0005
	16 Nov 2021	0445_SW463_211115	Normal	EM2122999	*1.36*	0.04	*2.10*		0.05	0.03	0.74	0.04	<0.02	<0.1	0.02	0.07		<0.02	<0.02	<0.02	<0.02
	04 May 2022	0445_SW463_220504	Normal	EM2208383	*0.99*	0.02	**1.41**		0.04	0.02	0.42	0.02	<0.02	<0.1	0.03	0.02		<0.02	<0.02	<0.02	<0.02
	11 Oct 2022	0445_QC101_221011	Field_D	EM2220271	*1.00*	0.05	**1.49**		0.03	0.03	0.49	0.02	<0.02	<0.1	0.06	0.10		0.02	<0.02	<0.02	<0.02
		0445_QC201_221011	Interlab_D	932350	*1.7*	0.06	*2.35*	<0.01	0.04	0.03	0.65	0.04	<0.01	0.07	0.09	0.14	0.02	0.03	0.01	<0.01	<0.01
		0445_SW463_221011	Normal	EM2220271	*1.02*	0.05	**1.51**		0.03	0.03	0.49	0.02	<0.02	<0.1	0.06	0.10		<0.02	<0.02	<0.02	<0.02
	02 May 2023	0445_SW463_230502	Normal	EM2308009	*0.30*	<0.01	**0.37**		<0.02	<0.02	0.07	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	23 Oct 2023	0445_SW463_20231023	Normal	EM2319354	*0.90*	0.03	**1.35**		0.02	0.02	0.45	<0.02	<0.02	<0.1	0.02	0.06		<0.02	<0.02	<0.02	<0.02
SW470	02 Aug 2018	0445_SW470_0.5_180802	Normal	ES1823003	*0.160*	0.0048	**0.330**		0.0223	0.0153	0.170	0.0057	<0.0005	<0.002	<0.0005	0.0066		0.0028	<0.0005	<0.0005	<0.0005
	03 Nov 2019	0445_SW470_0.5_191103	Normal	ES1936497	*0.179*	0.0052	**0.388**		0.0258	0.0264	0.209	0.0074	<0.0020	<0.002	<0.0020	0.0072		<0.0020	<0.0020	<0.0020	<0.0020
	16 Nov 2021	0445_SW470_211116	Normal	EM2122999	*0.06*	<0.01	**0.13**		0.02	<0.02	0.07	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	04 May 2022	0445_SW470_220504	Normal	EM2208383	*0.19*	<0.01	**0.42**		0.03	0.03	0.23	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
		0445_QC203_220504	Interlab_D	886780	*0.54*	0.03	**0.67**	<0.01	0.03	0.02	0.13	<0.01	<0.01	<0.05	0.04	0.04	0.02	0.02	<0.01	<0.01	<0.01
		0445_QC103_220504	Field_D	EM2208381	*0.46*	0.02	**0.61**		0.02	<0.02	0.15	<0.02	<0.02	<0.1	0.04	0.04		<0.02	<0.02	<0.02	<0.02
	12 Oct 2022	0445_SW470_221012	Normal	EM2220270	*0.04*	<0.01	**0.08**		<0.02	<0.02	0.04	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	06 May 2023	0445_SW470_230506	Normal	EM2308009	*0.11*	<0.01	**0.21**		<0.02	<0.02	0.10	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	27 Oct 2023	0445_SW470_20231027	Normal	EM2319354	*0.08*	<0.01	**0.19**		<0.02	<0.02	0.11	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
	05 Apr 2024	0445_SW470_240405	Normal	EM2405435	*0.23*	<0.01	**0.50**		0.04	0.03	0.27	<0.02	<0.02	<0.1	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
SW471	02 Aug 2018	0445_SW471_0.2_180802	Normal	ES1823005	*0.257*	0.0312	**1.14**		0.306	0.192	0.881	0.0351	<0.0005	<0.002	0.0536	0.138		0.0319	<0.0005	<0.0005	<0.0005
	03 Nov 2019	0445_SW471_0.5_191103	Normal	ES1936497	*0.690*	0.0844	*2.55*		0.414	0.391	1.86	0.0810	<0.0020	<0.002	0.0800	0.316		0.0508	<0.0020	<0.0020	<0.0020
	16 Nov 2021	0445_SW471_211116	Normal	EM2122968	*0.81*	0.06	**1.82**		0.23	0.15	1.01	0.07	<0.02	<0.1	0.06	0.17		0.04	<0.02	<0.02	<0.02
	03 May 2022	0445_SW471_220503	Normal	EM2208382	*1.14*	0.15	*3.44*		0.45	0.40	2.30	0.12	<0.02	<0.1	0.14	0.46		0.12	<0.02	<0.02	<0.02
	12 Oct 2022	0445_SW471_221012	Normal	EM2220270	*0.64*	0.04	**1.40**		0.12	0.11	0.76	0.04	<0.02	<0.1	0.04	0.12		0.02	<0.02	<0.02	<0.02
	06 May 2023	0445_SW471_ 230506	Normal	EM2308004	*0.32*	0.03	**0.80**		0.08	0.09	0.48	0.02	<0.02	<0.1	<0.02	0.08		<0.02	<0.02	<0.02	<0.02
	25 Oct 2023	0445_SW471_20231025	Normal	EM2319357	*0.96*	0.08	*2.34*		0.25	0.19	1.38	0.08	<0.02	<0.1	0.07	0.28		0.05	<0.02	<0.02	<0.02
SW487	02 Aug 2018	0445_SW487_0.01_180802	Normal	ES1823005	*6.26*	0.383	*9.09*		0.541	0.536	2.83	0.350	<0.0005	0.041	0.191	0.671		0.179	0.0013	<0.0005	<0.0005
	16 Nov 2021	0445_SW487_211116	Normal	EM2122968	*3.45*	0.30	*6.82*		0.60	0.57	3.37	0.27	<0.02	0.2	0.21	0.69		0.18	<0.02	<0.02	<0.02
	03 May 2022	0445_SW487_220503	Normal	EM2208382	*4.13*	0.32	*7.71*		0.64	0.61	3.58	0.29	<0.02	0.1	0.25	0.86		0.19	<0.02	<0.02	<0.02
	12 Oct 2022	0445_SW487_221012	Normal	EM2220270	*4.09*	0.22	*7.21*		0.48	0.48	3.12	0.26	<0.02	<0.1	0.15	0.61		0.13	<0.02	<0.02	<0.02
	06 May 2023	0445_SW487_ 230506	Normal	EM2308004	*2.84*	0.28	*6.16*		0.57	0.61	3.32	0.25	<0.02	0.1	0.20	0.85		0.16	<0.02	<0.02	<0.02
	25 Oct 2023	0445_SW487_20231025	Normal	EM2319357	*2.90*	0.26	*6.38*		0.47	0.51	3.48	0.24	<0.02	<0.1	0.21	0.82		0.15	<0.02	<0.02	<0.02
	05 Apr 2024	0445_SW487_240405	Normal	EM2405437	*4.68*	0.34	*9.10*		0.64	0.67	4.42	0.30	<0.02	0.1	0.26	1.09		0.19	<0.02	<0.02	<0.02

					carbons																	
					Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																						
PFAS NEMP 2.0 Table 1 Health Recreational Water																						
PFAS NEMP 2.0 Table 5 Freshwater 95%																						
PFAS NEMP 2.0 Table 5 Freshwater 99%																						
Location Code	Date	Field ID	Sample Type	Lab Report Number																		
SW307	17 Nov 2021	0445_SW307_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.17		
	14 Oct 2022	0445_SW307_221013	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.27		
SW310	17 Nov 2021	0445_SW310_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.32		
	10 Oct 2022	0445_SW310_221010	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.58		
	03 May 2023	0445_SW310_230503	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.12		
	31 May 2024	0445_SW310_240531	Normal	EM2409333	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.13		
SW311	17 Nov 2021	0445_SW311_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.37		
	10 Oct 2022	0445_QC100_20221010	Field_D	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.85		
		0445_QC200_221010	Interlab_D	932350	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	3.71	1.3	2.5
		0445_SW311_221010	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.27		
	06 May 2023	0445_SW311_230506	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.20		
	31 May 2024	0445_SW311_240531	Normal	EM2409333	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.38		
SW313	17 Nov 2021	0445_QC111_211117	Field_D	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	6.87		
		0445_QC211_211117	Interlab_D	842787	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	8.14	4.85	6.45
		0445_SW313_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	6.10		
	10 Oct 2022	0445_SW313_221010	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	5.33		
	01 May 2023	0445_SW313_230501	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	5.04		
	23 Oct 2023	0445_SW313_20231023	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	8.61		
SW316	17 Oct 2017	0445S_SW316_0.1_171017	Normal	ES1726190	<0.0020	<0.0020	<0.0050	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	<0.002	<0.002	<0.002	1.26		
	17 Nov 2021	0445_SW316_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.24		
	16 May 2022	0445S_SW316_220516	Normal	EM2209833	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.23		
	10 Oct 2022	0445_SW316_221010	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.60		
	03 May 2023	0445_QC103_230503	Field_D	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.21		
		0445_QC203_230503	Interlab_D	987797	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.23	0.14	0.21
		0445_SW316_230503	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.18		
	31 May 2024	0445_SW316_240531	Normal	EM2409333	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.21		
SW321	17 Nov 2021	0445_QC112_211117	Field_D	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	7.21		
		0445_QC212_211117	Interlab_D	842787	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	11.64	7.61	10.41
		0445_SW321_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	6.75		
	04 May 2022	0445_SW321_220504	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	7.47		
	10 Oct 2022	0445_SW321_221010	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.12		
	01 May 2023	0445_QC100_230501	Field_D	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	5.22		
		0445_QC200_230501	Interlab_D	987797	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	5.58	4.73	5.35
		0445_SW321_230501	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	4.92		
	24 Oct 2023	0445_SW321_20231023	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.64		
	31 May 2024	0445_SW321_240531	Normal	EM2409333	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.93		
SW322	17 Nov 2021	0445_SW322_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	5.34		
	04 May 2022	0445_SW322_220504	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	8.42		
	10 Oct 2022	0445_SW322_221010	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.00		
	04 May 2023	0445_SW322_230504	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	4.01		
	23 Oct 2023	0445_SW322_20231023	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.48		
	31 May 2024	0445_SW322_240531	Normal	EM2409333	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.54		
SW323	17 Oct 2017	0445S_SW323_0.2_171017	Normal	ES1726190	<0.0020	<0.0020	<0.0050	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	0.005	<0.002	<0.002	1.65		
	17 Nov 2021	0445_SW323_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.09		
	04 May 2022	0445_SW323_220504	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.97		
	10 Oct 2022	0445_SW323_221010	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.94		
	04 May 2023	0445_SW323_230504	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.02		
	23 Oct 2023	0445_QC103_20231023	Field_D	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.51		
		0445_QC203_20231023	Interlab_D	1039507	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	1.29	0.91	1.14
		0445_SW323_20231023	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.46		
	31 May 2024	0445_SW323_240531	Normal	EM2409333	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.41		

					carbons																	
					Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																					
PFAS NEMP 2.0 Table 1 Health Recreational Water																					
PFAS NEMP 2.0 Table 5 Freshwater 95%																					
PFAS NEMP 2.0 Table 5 Freshwater 99%																					
Location Code	Date	Field ID	Sample Type	Lab Report Number																	
SW324	20 Oct 2017	0445S_SW324_0.1_171020	Normal	ES1726682	<0.0005	<0.0005	<0.0005	0.0039	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.015	0.003	<0.001	2.86		
	17 Nov 2021	0445_QC110_211117	Field_D	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.73		
		0445_QC210_211117	Interlab_D	842787	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	4.43	2.71	3.71
		0445_SW324_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.20		
	04 May 2022	0445_SW324_220504	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.33		
	10 Oct 2022	0445_SW324_221010	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.33		
	01 May 2023	0445_QC101_230501	Field_D	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.04		
		0445_QC201_230501	Interlab_D	987797	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	3.44	2.18	2.89
		0445_SW324_230501	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.07		
	26 Oct 2023	0445_SW324_20231026	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.66		
	03 Apr 2024	0445_QC104_240403	Field_D	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.34		
		0445_QC204_240403	Interlab_D	1086312	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	2.32	1.17	1.74
		0445_SW324_240403	Normal	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.37		
SW326	17 Nov 2021	0445_SW326_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.49	0.11	<0.05	13.2		
	04 May 2022	0445_SW326_220504	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.76		
	14 Oct 2022	0445_SW326_221014	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.73		
	01 May 2023	0445_SW326_230501	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.55		
	23 Oct 2023	0445_QC102_20231023	Field_D	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.08	<0.05	<0.05	4.03		
		0445_QC202_20231023	Interlab_D	1039507	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	0.07	<0.01	<0.01	4.13	2.9	3.49
		0445_SW326_20231023	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.07	<0.05	<0.05	3.90		
	02 Apr 2024	0445_QC100_240402	Field_D	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.62		
		0445_QC200_240402	Interlab_D	1086312	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.67	0.29	0.45
		0445_SW326_240402	Normal	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.62		
SW332	17 Oct 2017	0445S_SW332_0.05_171017	Normal	ES1726190	<0.0020	<0.0020	<0.0050	0.0164	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	<0.002	<0.002	<0.002	5.47		
	17 Nov 2021	0445_SW332_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04		
	14 Oct 2022	0445_SW332_221014	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.10		
	03 May 2023	0445_SW332_230503	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.01		
	28 Nov 2023	0445_QC100_231128	Field_D	EM2321318	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	5.16		
		0445_QC200_231128	Interlab_D	1049115	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	5.14	3.34	4
		0445_SW332_231128	Normal	EM2321318	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	5.52		
	31 May 2024	0445_QC101_240531	Field_D	EM2409333	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.58		
		0445_QC201_240531	Interlab_D	1105323	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	1.92	0.66	1.1
		0445_SW332_240531	Normal	EM2409333	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.61		
SW333	17 Oct 2017	0445S_SW333_0.05_171017	Normal	ES1726190	<0.0020	<0.0020	<0.0050	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	<0.002	<0.002	<0.002	0.680		
	17 Nov 2021	0445_SW333_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.19		
	04 May 2022	0445_SW333_220504	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.13		
	14 Oct 2022	0445_SW333_221014	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.67		
	03 May 2023	0445_SW333_230503	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.16		
	28 Nov 2023	0445_SW333_231128	Normal	EM2321318	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.85		
	31 May 2024	0445_SW333_240531	Normal	EM2409333	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.43		
SW336	18 Oct 2017	0445S_QC167_171018	Field_D	ES1726433	<0.0020	<0.0020	<0.0050	0.0132	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	0.006	0.930	1.30	0.020	26.8		
		0445S_QC267_171018	Interlab_D	569078	0.011	<0.001	<0.001	0.042	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	0.92	1.9	0.018	60.943		
		0445S_SW336_0.1_171018	Normal	ES1726433	<0.0020	<0.0020	<0.0050	0.0126	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	0.006	1.03	1.27	0.016	27.4		
	15 Nov 2021	0445_SW336_211115	Normal	EM2122998	0.02	<0.02	<0.05	0.03	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.35	0.83	0.14	10.5		
	04 May 2022	0445_SW336_220504	Normal	EM2208381	0.24	0.08	<0.09	0.11	<0.09	<0.09	<0.09	<0.09	<0.04	<0.04	<0.05	0.90	1.44	1.19	15.9		
	14 Oct 2022	0445_QC106_20221014	Field_D	EM2220286	<0.02	<0.02	<0.05	0.04	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.25	0.47	<0.05	6.93		
		0445_QC206_221014	Interlab_D	932350	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	0.33	0.58	0.04	10.12	7.05	7.85
		0445_SW336_221014	Normal	EM2220286	<0.02	<0.02	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.27	0.53	<0.05	8.57		
	04 May 2023	0445_SW336_230504	Normal	EM2308015	0.02	<0.02	<0.05	0.03	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	1.28	0.77	0.16	11.4		
	27 Oct 2023	0445_SW336_20231027	Normal	EM2319356	0.07	<0.02	<0.05	0.04	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	1.09	0.96	0.32	24.8		
SW338	18 Oct 2017	0445S_SW338_0.2_171018	Normal	ES1726433	<0.0020	<0.0020	<0.0050	0.0046	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	<0.002	<0.002	<0.002	7.18		
	10 Nov 2021	0445_SW338_211109	Normal	EM2122518	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.70		
	04 May 2022	0445_SW338_220504	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.25		
	14 Oct 2022	0445_QC207_221014	Interlab_D	932350	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	1.33	0.85	1.07
		0445_SW338_221014	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.91		
	02 May 2023	0445_QC102_230502	Field_D	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.98		
		0445_QC202_230502	Interlab_D	987797	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	1.17	0.76	0.95
		0445_SW338_230502	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.92		
	25 Oct 2023	0445_SW338_20231025	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.51		
	02 Apr 2024	0445_SW338_240402	Normal	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.09		

					carbons																	
					Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																					
PFAS NEMP 2.0 Table 1 Health Recreational Water																					
PFAS NEMP 2.0 Table 5 Freshwater 95%																					
PFAS NEMP 2.0 Table 5 Freshwater 99%																					
Location Code	Date	Field ID	Sample Type	Lab Report Number																	
SW340	18 Oct 2017	0445S_SW340_0.03_171018	Normal	ES1726433	0.0024	<0.0020	<0.0050	0.0110	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	0.180	0.410	0.045	9.38		
	10 Nov 2021	0445_SW340_211109	Normal	EM2122518	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	7.61		
	14 Oct 2022	0445_QC108_20221014	Field_D	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.14		
		0445_QC208_221014	Interlab_D	932350	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	0.05	0.03	<0.01	2.05	1.36	1.65
		0445_SW340_221014	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.22		
	02 May 2023	0445_SW340_230502	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.85		
	25 Oct 2023	0445_SW340_20231025	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.29		
	31 May 2024	0445_QC102_240531	Field_D	EM2409333	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	0.06	<0.05	3.15		
		0445_QC202_240531	Interlab_D	1105323	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	0.07	0.02	4.04	2.55	3.04
		0445_SW340_240531	Normal	EM2409333	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	0.06	<0.05	3.13		
SW346	12 Oct 2017	0445S_SW346_0.2_171013	Normal	ES1725991	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.052	0.037	0.001	2.64		
	17 Nov 2021	0445_SW346_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.23		
	04 May 2022	0445_SW346_220504	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.05		
	14 Oct 2022	0445_SW346_221014	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.37		
	05 May 2023	0445_SW346_230505	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.04		
	25 Oct 2023	0445_SW346_20231025	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.96		
	02 Apr 2024	0445_SW346_240402	Normal	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.38		
SW349	12 Oct 2017	0445S_QC159_171012	Field_D	ES1725991	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.011	0.002	<0.001	1.99		
	13 Oct 2017	0445S_SW349_0.5_171013	Normal	ES1725991	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.010	0.001	<0.001	2.10		
	15 Nov 2021	0445_QC206_211115	Interlab_D	842787	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	1.51	0.89	1.11
		0445_QC106_211115	Field_D	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.00		
		0445_SW349_211115	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.09		
	04 May 2022	0445_SW349_220504	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.74		
	14 Oct 2022	0445_SW349_221014	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.80		
	02 May 2023	0445_SW349_230502	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.71		
	23 Oct 2023	0445_QC100_20231023	Field_D	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.12		
		0445_QC200_20231023	Interlab_D	1039507	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	1	0.66	0.82
		0445_SW349_20231023	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.12		
	02 Apr 2024	0445_QC101_240402	Field_D	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.44		
		0445_QC201_240402	Interlab_D	1086312	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	1.66	1.05	1.27
		0445_SW349_240402	Normal	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.46		
SW355	13 Oct 2017	0445S_SW355_0.5_171013	Normal	ES1725991	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.002	<0.001	<0.001	0.813		
	17 Nov 2021	0445_QC107_211117	Field_D	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.36		
		0445_QC207_211117	Interlab_D	842787	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.52	0.31	0.41
		0445_SW355_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.36		
	04 May 2022	0445_QC204_220504	Interlab_D	886780	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.37	0.27	0.32
		0445_SW355_220504	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.13		
		0445_QC104_220504	Field_D	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.25		
	14 Oct 2022	0445_SW355_221014	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.28		
	04 May 2023	0445_SW355_230504	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.17		
	23 Oct 2023	0445_QC101_20231023	Field_D	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.30		
		0445_QC201_20231023	Interlab_D	1039507	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.26	0.16	0.21
		0445_SW355_20231023	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.28		
	02 Apr 2024	0445_SW355_240403	Normal	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.30		
SW370	23 Oct 2017	0445N_SW370_0.01_171023	Normal	ES1726698	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.003	<0.001	<0.001	0.550		
	17 Nov 2021	0445_SW370_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.33		
	06 May 2022	0445_SW370_220506	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.13		
	15 Oct 2022	0445_QC109_20221015	Field_D	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.20		
		0445_QC209_221015	Interlab_D	932350	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.29	0.19	0.27
		0445_SW370_221015	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.20		
	04 May 2023	0445_SW370_230504	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.12		
	26 Oct 2023	0445_SW370_20231026	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.16		
SW374	23 Oct 2017	0445N_SW374_0.1_171023	Normal	ES1726698	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.525		
	17 Nov 2021	0445_SW374_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.17		
	06 May 2022	0445_SW374_220506	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.07		
	15 Oct 2022	0445_SW374_221014	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.12		
	05 May 2023	0445_SW374_230505	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.10		
	26 Oct 2023	0445_SW374_20231026	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.13		
	04 Apr 2024	0445_SW374_240404	Normal	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.09		

					carbons																	
					Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																						
PFAS NEMP 2.0 Table 1 Health Recreational Water																						
PFAS NEMP 2.0 Table 5 Freshwater 95%																						
PFAS NEMP 2.0 Table 5 Freshwater 99%																						
Location Code	Date	Field ID	Sample Type	Lab Report Number																		
SW375	23 Oct 2017	0445N_QC128_171023	Field_D	ES1726698	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.465		
		0445N_QC228_171023	Interlab_D	569535	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.001	<0.001	0.451		
		0445N_SW375_0.1_171023	Normal	ES1726698	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.440		
	01 Aug 2018	0445_QC105_180801	Field_D	ES1823003	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.139		
		0445_QC205_180801	Interlab_D	611290	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.001	<0.001	0.145	0.076	0.107
		0445_SW375_0.2_180801	Normal	ES1823003	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.144		
	17 Nov 2021	0445_SW375_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.15		
	06 May 2022	0445_SW375_220506	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.08		
	12 Oct 2022	0445_SW375_221012	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.08		
	05 May 2023	0445_SW375_230505	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.07		
	26 Oct 2023	0445_SW375_20231026	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.12		
	04 Apr 2024	0445_QC110_240404	Field_D	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.08		
		0445_QC210_240404	Interlab_D	1086312	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1	0.07	0.09
		0445_SW375_240404	Normal	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.07		
SW379	16 Nov 2021	0445_SW379_21116	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.07		
	14 Oct 2022	0445_SW379_221014	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.20		
SW380	10 Nov 2021	0445_SW380_211108	Normal	EM2122518	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.59		
	14 Oct 2022	0445_SW380_221014	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.20		
	06 May 2023	0445_SW380_230506	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.11		
SW382	24 Oct 2017	0445E_QC131_171024	Field_D	ES1726816	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.164		
		0445E_SW382_0.1_171024	Normal	ES1726816	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.175		
	16 Nov 2021	0445_QC109_211116	Field_D	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
		0445_QC209_211116	Interlab_D	842787	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1	<0.01	<0.01
		0445_SW382_211116	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	03 May 2022	0445_SW382_220503	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	13 Oct 2022	0445_SW382_221013	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	05 May 2023	0445_SW382_230505	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	25 Oct 2023	0445_QC104_20231025	Field_D	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
		0445_QC204_20231025	Interlab_D	1039507	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1	<0.01	<0.01
		0445_SW382_20231025	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	04 Apr 2024	0445_QC106_240404	Field_D	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
		0445_QC206_240404	Interlab_D	1086312	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1	<0.01	<0.01
		0445_SW382_240404	Normal	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
SW387	25 Oct 2017	0445E_SW387_0.2_171025	Normal	ES1726955	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.222		
	16 Nov 2021	0445_SW387_211116	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.24		
	03 May 2022	0445_QC101_220503	Field_D	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.12		
		0445_QC201_220503	Interlab_D	886780	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.11	0.04	0.1
		0445_SW387_220503	Normal	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.10		
	12 Oct 2022	0445_SW387_221012	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.26		
	06 May 2023	0445_SW387_230506	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	27 Oct 2023	0445_SW387_20231027	Normal	EM2319356	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.33		
	05 Apr 2024	0445_SW387_240405	Normal	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.40		
SW388	25 Oct 2017	0445E_SW388_0.2_171025	Normal	ES1726955	<0.0020	<0.0020	<0.0050	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	<0.002	<0.002	<0.002	0.416		
	16 Nov 2021	0445_SW388_211116	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.54		
	16 May 2022	0445S_SW388_220516	Normal	EM2209833	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.07		
	12 Oct 2022	0445_SW388_221210	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.12		
SW390	13 Oct 2017	0445_SW390_0.5_171013	Normal	ES1725997	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0006		
	31 Jul 2018	0445_SW390_0.5_180731	Normal	ES1823003	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0003		
	26 Nov 2018	0445_SW390_0.5_181126	Normal	ES1835585	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0010		
	09 Nov 2021	0445_SW390_211109	Normal	EM2122518	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	05 May 2022	0445_SW390_220505	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	11 Oct 2022	0445_SW390_221011	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	04 May 2023	0445_SW390_230504	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	27 Oct 2023	0445_SW390_20231027	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	05 Apr 2024	0445_SW390_240405	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		

					carbons																	
					Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																					
PFAS NEMP 2.0 Table 1 Health Recreational Water																					
PFAS NEMP 2.0 Table 5 Freshwater 95%																					
PFAS NEMP 2.0 Table 5 Freshwater 99%																					
Location Code	Date	Field ID	Sample Type	Lab Report Number																	
SW393	16 Oct 2017	0445_SW393_0.1_171016	Normal	ES1726004	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.002	<0.001	<0.001	0.0029		
	01 Aug 2018	0445_SW393_0.2_180801	Normal	ES1823003	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0003		
	26 Nov 2018	0445_SW393_0.2_181127	Normal	ES1835585	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0009		
	16 Nov 2021	0445_SW393_211116	Normal	EM2122999	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	06 May 2022	0445_SW393_220506	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	10 Nov 2022	0445_SW393_221110	Normal	EM2222367	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	04 May 2023	0445_SW393_230504	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	26 Oct 2023	0445_SW393_20231025	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	05 Apr 2024	0445_SW393_240405	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
SW395	09 Oct 2017	0445_QC153_171009	Field_D	ES1725705	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.251		
		0445_QC253_171010	Interlab_D	567888	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.001	<0.001	0.274		
		0445_SW395_0.5_171010	Normal	ES1725705	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.286		
	03 Nov 2019	0445_SW395_0.5_191103	Normal	ES1936497	<0.0020	<0.0020	<0.0050	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	<0.002	<0.002	<0.002	0.157		
	16 Nov 2021	0445_SW395_211116	Normal	EM2122999	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.22		
	09 May 2022	0445_SW395_220509	Normal	EM2208629	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.10		
	10 Nov 2022	0445_SW395_221110	Normal	EM2222367	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.43		
	06 May 2023	0445_SW395_230506	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.06		
	27 Oct 2023	0445_SW395_20231027	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.10		
	05 Apr 2024	0445_SW395_240405	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.15		
SW396	10 Oct 2017	0445_SW396_0.5_171010	Normal	ES1725715	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	2.54		
	02 Aug 2018	0445_SW396_0.5_180802	Normal	ES1823005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	3.58		
	03 Nov 2019	0445_SW396_0.5_191103	Normal	ES1936497	<0.0020	<0.0020	<0.0050	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	<0.002	<0.002	<0.002	2.20		
	16 Nov 2021	0445_SW396_211116	Normal	EM2122968	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.02		
	03 May 2022	0445_SW396_220503	Normal	EM2208382	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.99		
	12 Oct 2022	0445_SW396_221012	Normal	EM2220270	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.40		
	06 May 2023	0445_SW396_ 230506	Normal	EM2308004	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.27		
	27 Oct 2023	0445_SW396_20231027	Normal	EM2319357	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.63		
SW397	10 Oct 2017	0445_SW397_0.5_171010	Normal	ES1725715	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	0.002	0.024	<0.001	<0.001	18.2		
		0445_SW397_1.0_171010	Normal	ES1725715	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	0.002	0.024	<0.001	<0.001	17.7		
		0445_SW397_1.3_171010	Normal	ES1725715	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	0.002	0.023	<0.001	<0.001	18.2		
	02 Aug 2018	0445_SW397_0.5_180802	Normal	ES1823005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	0.001	0.022	<0.001	<0.001	11.0		
	26 Nov 2018	0445_QC125_181126	Field_D	ES1835587	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	0.002	0.023	<0.001	<0.001	10.7		
		0445_QC225_181126	Interlab_D	630629	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.002	0.013	<0.001	<0.001	17	6.3	12
		0445_SW397_0.5_181126	Normal	ES1835587	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	0.002	0.024	<0.001	<0.001	12.7		
	03 Nov 2019	0445_QC135_191103	Field_D	ES1936497	<0.0020	<0.0020	<0.0050	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	0.021	<0.002	<0.002	13.9		
		0445_SW397_0.5_191103	Normal	ES1936497	<0.0020	<0.0020	<0.0050	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	0.019	<0.002	<0.002	13.5		
	16 Nov 2021	0445_SW397_211116	Normal	EM2122968	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	9.62		
	03 May 2022	0445_SW397_220503	Normal	EM2208382	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	11.7		
	12 Oct 2022	0445_SW397_221012	Normal	EM2220270	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	9.09		
	06 May 2023	0445_SW397_ 230506	Normal	EM2308004	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	9.25		
	25 Oct 2023	0445_SW397_20231025	Normal	EM2319357	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	9.56		
	05 Apr 2024	0445_SW397_240405	Normal	EM2405437	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	12.8		
SW398	12 Oct 2017	0445_SW398_0.5_171012	Normal	ES1725997	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0009		
	01 Aug 2018	0445_SW398_0.5_180801	Normal	ES1823003	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0003		
	26 Nov 2018	0445_SW398_0.5_181126	Normal	ES1835585	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0004		
	16 Nov 2021	0445_SW398_211116	Normal	EM2122999	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	03 May 2022	0445_SW398_220503	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	12 Oct 2022	0445_SW398_221012	Normal	EM2220270	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.08		
	06 May 2023	0445_SW398_230506	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	27 Oct 2023	0445_SW398_20231027	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	05 Apr 2024	0445_SW398_240405	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
SW400	10 Oct 2017	0445_SW400_0.3_171010	Normal	ES1725715	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	1.27		
	02 Aug 2018	0445_QC106_180802	Field_D	ES1823005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.337		
		0445_QC206_180802	Interlab_D	611294	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	0.005	<0.001	<0.005	<0.001	<0.001	0.494	0.162	0.362
		0445_SW400_0.2_180802	Normal	ES1823005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.391		
	03 Nov 2019	0445_SW400_0.2_191103	Normal	ES1936497	<0.0020	<0.0020	<0.0050	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	<0.002	<0.002	<0.002	0.326		
	16 Nov 2021	0445_SW400_211116	Normal	EM2122968	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.25		
	03 May 2022	0445_SW400_220503	Normal	EM2208382	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.75		
	12 Oct 2022	0445_SW400_221012	Normal	EM2220270	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.77		
	06 May 2023	0445_SW400_ 230506	Normal	EM2308004	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.40		
	25 Oct 2023	0445_SW400_20231025	Normal	EM2319357	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.29		
	05 Apr 2024	0445_SW400_240405	Normal	EM2405437	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.00		

					carbons																	
					Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																						
PFAS NEMP 2.0 Table 1 Health Recreational Water																						
PFAS NEMP 2.0 Table 5 Freshwater 95%																						
PFAS NEMP 2.0 Table 5 Freshwater 99%																						
Location Code	Date	Field ID	Sample Type	Lab Report Number																		
SW401	10 Oct 2017	0445_SW401_0.4_171010	Normal	ES1725715	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	1.10		
	03 Nov 2019	0445_SW401_0.2_191103	Normal	ES1936497	<0.0020	<0.0020	<0.0050	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	<0.002	<0.002	<0.002	0.291		
	16 Nov 2021	0445_SW401_211116	Normal	EM2122968	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.31		
	03 May 2022	0445_SW401_220503	Normal	EM2208382	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.72		
	12 Oct 2022	0445_SW401_221012	Normal	EM2220270	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.36		
	06 May 2023	0445_SW401_ 230506	Normal	EM2308004	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.48		
	25 Oct 2023	0445_SW401_20231025	Normal	EM2319357	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.58		
SW403	12 Oct 2017	0445_SW403_0.5_171012	Normal	ES1725997	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.336		
	12 Nov 2021	0445_SW403_211112	Normal	EM2122519	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.84		
	05 May 2022	0445_SW403_220505	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.84		
	15 Oct 2022	0445_SW403_221015	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04		
	05 May 2023	0445_SW403_230505	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.27		
	26 Oct 2023	0445_SW403_20231025	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.45		
SW404	11 Oct 2017	0445_SW404_0.5_171011	Normal	ES1725716	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0012		
	01 Aug 2018	0445_SW404_0.5_180801	Normal	ES1823003	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0003		
	26 Nov 2018	0445_SW404_0.52_181126	Normal	ES1835585	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0025		
	12 Nov 2021	0445_SW404_211112	Normal	EM2122519	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	17 Nov 2021	0445_SW404_211117	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	05 May 2022	0445_SW404_220505	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	15 Oct 2022	0445_SW404_221015	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	04 May 2023	0445_SW404_230504	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	23 Oct 2023	0445_SW404_20231023	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	03 Apr 2024	0445_SW404_240403	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
SW405	12 Oct 2017	0445_SW405_0.2_171012	Normal	ES1725997	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.333		
	02 Aug 2018	0445_SW405_0.1_180802	Normal	ES1823003	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.118		
	12 Nov 2021	0445_SW405_211112	Normal	EM2122519	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.74		
	05 May 2022	0445_SW405_220505	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.13		
	15 Oct 2022	0445_SW405_221015	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04		
	06 May 2023	0445_SW405_230506	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.11		
	25 Oct 2023	0445_SW405_20231025	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.93		
SW409	14 Feb 2018	0445_SW409_0.0_180214	Normal	ES1805190	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.139		
	12 Nov 2021	0445_SW409_211112	Normal	EM2122519	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
	06 May 2022	0445_SW409_220506	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.05		
	15 Oct 2022	0445_SW409_221015	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.09		
	04 May 2023	0445_SW409_230504	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04		
	24 Oct 2023	0445_SW409_20231023	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.09		
	03 Apr 2024	0445_SW409_240403	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
SW412	12 Oct 2017	0445_SW412_0.5_171012	Normal	ES1725997	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.272		
	02 Aug 2018	0445_SW412_0.1_180802	Normal	ES1823003	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0913		
	26 Nov 2018	0445_QC126_181126	Field_D	ES1835585	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0789		
		0445_SW412_0.2_181126	Normal	ES1835585	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0766		
	12 Nov 2021	0445_SW412_211112	Normal	EM2122519	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.05		
	06 May 2022	0445_SW412_220506	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.11		
	15 Oct 2022	0445_SW412_221015	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03		
	05 May 2023	0445_SW412_230505	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
	26 Oct 2023	0445_SW412_20231026	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04		
	04 Apr 2024	0445_SW412_240404	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
SW416	11 Oct 2017	0445_SW416_0.5_171011	Normal	ES1725716	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0003		
	01 Aug 2018	0445_SW416_0.5_180801	Normal	ES1823003	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0003		
	26 Nov 2018	0445_SW416_0.5_181126	Normal	ES1835585	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0005		
	12 Nov 2021	0445_SW416_211111	Normal	EM2122519	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	05 May 2022	0445_SW416_220505	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	12 Oct 2022	0445_SW416_221012	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	04 May 2023	0445_SW416_230504	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	24 Oct 2023	0445_SW416_20231024	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	04 Apr 2024	0445_SW416_240404	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		

					carbons																	
					Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																						
PFAS NEMP 2.0 Table 1 Health Recreational Water																						
PFAS NEMP 2.0 Table 5 Freshwater 95%																						
PFAS NEMP 2.0 Table 5 Freshwater 99%																						
Location Code	Date	Field ID	Sample Type	Lab Report Number																		
SW424	11 Oct 2017	0445_QC213	Interlab_D	567942	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	6.38		
		0445_QC113	Field_D	ES1725716	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.002	<0.001	<0.001	5.82		
		0445_SW424_0.1_171011	Normal	ES1725716	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.002	<0.001	<0.001	5.05		
	13 Oct 2017	0445_SW424_0.1_171013	Normal	ES1725997	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.010	0.003	<0.001	1.68		
	15 Nov 2021	0445_QC208_211115	Interlab_D	842787	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	2.22	1.14	1.87
		0445_SW424_211115	Normal	EM2122999	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.36		
	07 May 2022	0445_SW424_220504	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.45		
	11 Oct 2022	0445_SW424_221011	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.03		
	02 May 2023	0445_SW424_230502	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.46		
	23 Oct 2023	0445_SW424_20231023	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.97		
	05 Apr 2024	0445_SW424_240405	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
SW427	16 Oct 2017	0445_SW427_0.0_171016	Normal	ES1726004	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.001	<0.001	<0.001	0.156		
	15 Nov 2021	0445_SW427_211115	Normal	EM2122999	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.25		
	06 May 2022	0445_SW427_220506	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03		
	11 Oct 2022	0445_SW427_221011	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.56		
	04 May 2023	0445_SW427_230504	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.54		
	23 Oct 2023	0445_SW427_20231023	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.14		
	02 Apr 2024	0445_SW427_240402	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.05		
SW430	16 Oct 2017	0445_SW430_0.1_171016	Normal	ES1726004	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0766		
	02 Aug 2018	0445_SW430_0.1_180802	Normal	ES1823003	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0471		
	16 Nov 2021	0445_SW430_211115	Normal	EM2122999	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.16		
	06 May 2022	0445_SW430_220506	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	11 Oct 2022	0445_SW430_221011	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.17		
	04 May 2023	0445_SW430_230504	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.19		
	23 Oct 2023	0445_SW430_20231023	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.08		
	03 Apr 2024	0445_SW430_240403	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
SW431	16 Oct 2017	0445_SW431_0.1_171016	Normal	ES1726004	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0867		
	16 Nov 2021	0445_SW431_211116	Normal	EM2122999	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.10		
	06 May 2022	0445_SW431_220506	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
	11 Oct 2022	0445_SW431_221011	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.19		
	02 May 2023	0445_SW431_230502	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03		
	23 Oct 2023	0445_SW431_20231023	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.05		
	03 Apr 2024	0445_SW431_240403	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04		
SW432	16 Oct 2017	0445_SW432_0.1_171016	Normal	ES1726004	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0936		
	16 Nov 2021	0445_SW432_211116	Normal	EM2122999	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.08		
	06 May 2022	0445_SW432_220506	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
	11 Oct 2022	0445_SW432_221011	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.09		
	04 May 2023	0445_SW432_230504	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.06		
	23 Oct 2023	0445_SW432_20231023	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.08		
	03 Apr 2024	0445_SW432_240403	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03		
SW434	09 Oct 2017	0445_SW434_0.5_171011	Normal	ES1725705	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0045		
	15 Nov 2021	0445_SW434_211115	Normal	EM2122999	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.07		
	06 May 2022	0445_SW434_220506	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
	11 Oct 2022	0445_SW434_221011	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	02 May 2023	0445_SW434_230502	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03		
	25 Oct 2023	0445_SW434_20231025	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
	03 Apr 2024	0445_SW434_240403	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01		
SW448	20 Oct 2017	0445S_SW448_0.1_171020	Normal	ES1726682	0.0005	0.0021	<0.0005	0.0056	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.012	0.005	<0.001	3.09		
	16 Nov 2021	0445_SW448_211115	Normal	EM2122998	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.85		
	14 Oct 2022	0445_SW448_221014	Normal	EM2220286	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.46		
	03 May 2023	0445_QC104_230503	Field_D	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.13		
		0445_QC204_230503	Interlab_D	987797	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	2.34	1.53	2.1
		0445_SW448_230503	Normal	EM2308015	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.04		
	02 Apr 2024	0445_SW448_240402	Normal	EM2405446	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	6.76		

					carbons																	
					Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg	ug/L
LOR					0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.0005	0.001	0.001	0.001	0.001	0.001	0.0003	0.001	0.001
PFAS NEMP 2.0 Table 1 Health Drinking Water																						
PFAS NEMP 2.0 Table 1 Health Recreational Water																						
PFAS NEMP 2.0 Table 5 Freshwater 95%																						
PFAS NEMP 2.0 Table 5 Freshwater 99%																						
Location Code	Date	Field ID	Sample Type	Lab Report Number																		
SW462	23 Nov 2017	0445_SW462_0.1_171123	Normal	ES1729741	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.172		
	01 Aug 2018	0445_SW462_0.2_180801	Normal	ES1823003	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0608		
	11 Nov 2021	0445_SW462_211111	Normal	EM2122518	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.26		
	05 May 2022	0445_QC205_220505	Interlab_D	886780	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1	0.04	0.06
		0445_SW462_220505	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.05		
		0445_QC105_220505	Field_D	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03		
	11 Oct 2022	0445_SW462_221011	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.01		
	04 May 2023	0445_SW462_230504	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.05		
	24 Oct 2023	0445_SW462_20231024	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.60		
	31 May 2024	0445_SW462_240531	Normal	EM2409333	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02		
SW463	11 Dec 2017	0445_SW463_0.1_171211	Normal	ES1731468	<0.0005	<0.0005	0.0060	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	1.50		
	16 Nov 2021	0445_SW463_211115	Normal	EM2122999	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.35		
	04 May 2022	0445_SW463_220504	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.56		
	11 Oct 2022	0445_QC101_221011	Field_D	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.80		
		0445_QC201_221011	Interlab_D	932350	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	2.88	1.76	2.41
		0445_SW463_221011	Normal	EM2220271	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.80		
	02 May 2023	0445_SW463_230502	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.37		
	23 Oct 2023	0445_SW463_20231023	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.50		
SW470	02 Aug 2018	0445_SW470_0.5_180802	Normal	ES1823003	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.388		
	03 Nov 2019	0445_SW470_0.5_191103	Normal	ES1936497	<0.0020	<0.0020	<0.0050	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	<0.002	<0.002	<0.002	0.460		
	16 Nov 2021	0445_SW470_211116	Normal	EM2122999	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.15		
	04 May 2022	0445_SW470_220504	Normal	EM2208383	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.48		
		0445_QC203_220504	Interlab_D	886780	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	0.87	0.57	0.7
		0445_QC103_220504	Field_D	EM2208381	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.73		
	12 Oct 2022	0445_SW470_221012	Normal	EM2220270	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.08		
	06 May 2023	0445_SW470_230506	Normal	EM2308009	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.21		
	27 Oct 2023	0445_SW470_20231027	Normal	EM2319354	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.19		
	05 Apr 2024	0445_SW470_240405	Normal	EM2405435	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.57		
SW471	02 Aug 2018	0445_SW471_0.2_180802	Normal	ES1823005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	1.92		
	03 Nov 2019	0445_SW471_0.5_191103	Normal	ES1936497	<0.0020	<0.0020	<0.0050	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.0020	<0.0020	<0.002	<0.002	<0.002	<0.002	3.97		
	16 Nov 2021	0445_SW471_211116	Normal	EM2122968	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.60		
	03 May 2022	0445_SW471_220503	Normal	EM2208382	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	5.28		
	12 Oct 2022	0445_SW471_221012	Normal	EM2220270	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.89		
	06 May 2023	0445_SW471_ 230506	Normal	EM2308004	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.10		
	25 Oct 2023	0445_SW471_20231025	Normal	EM2319357	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.34		
SW487	02 Aug 2018	0445_SW487_0.01_180802	Normal	ES1823005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	0.022	<0.001	<0.001	12.0		
	16 Nov 2021	0445_SW487_211116	Normal	EM2122968	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	9.84		
	03 May 2022	0445_SW487_220503	Normal	EM2208382	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	11.0		
	12 Oct 2022	0445_SW487_221012	Normal	EM2220270	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	9.54		
	06 May 2023	0445_SW487_ 230506	Normal	EM2308004	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	9.18		
	25 Oct 2023	0445_SW487_20231025	Normal	EM2319357	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	9.04		
	05 Apr 2024	0445_SW487_240405	Normal	EM2405437	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	12.7		

					Perfluorocarbons																
					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR					0.0002	0.0002	0.0002	0.005	0.0002	0.0002	0.0002	0.0002	0.0002	0.001	0.0002	0.0002	0.005	0.0002	0.0002	0.0002	
Location Code	**Date**	**Field ID**	**Sample Type**	**Lab Report Number**																	
SD323	17 Oct 2017	0445S_SD323_0.0_171017	Normal	ES1726190	0.0327	<0.0002	0.0342		<0.0002	<0.0002	0.0015	0.0003	0.0008	<0.001	<0.0002	0.0003		<0.0002	<0.0002	<0.0002	
	04 May 2022	0445_QC209_220504	Interlab_D	886780	0.016	<0.005	0.016	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
		0445_SD323_220504	Normal	EM2208381	0.0167	<0.0002	0.0173		<0.0002	<0.0002	0.0006	<0.0002	0.0004	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
		0445_QC109_220504	Field_D	EM2208381	0.0152	<0.0002	0.0158		<0.0002	<0.0002	0.0006	<0.0002	0.0004	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	04 May 2023	0445_SD323_230504	Normal	EM2308015	0.0129	<0.0002	0.0137		<0.0002	<0.0002	0.0008	<0.0002	0.0003	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	05 Apr 2024	0445_SD323_240405	Normal	EM2405446	0.0203	0.0002	0.0217		<0.0002	<0.0002	0.0014	<0.0002	0.0004	<0.001	<0.0002	0.0003		<0.0002	<0.0002	<0.0002	
SD346	13 Oct 2017	0445S_SD346_0.0_171013	Normal	ES1725991	0.0152	<0.0002	0.0161		<0.0002	<0.0002	0.0009	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	04 May 2022	0445_SD346_220504	Normal	EM2208381	0.0039	<0.0002	0.0041		<0.0002	<0.0002	0.0002	<0.0002	0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	05 May 2023	0445_SD346_230505	Normal	EM2308015	0.0109	<0.0002	0.0114		<0.0002	<0.0002	0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	02 Apr 2024	0445_QC102_240402	Field_D	EM2405446	0.0056	<0.0002	0.0056		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
		0445_QC202_240402	Interlab_D	1086312	0.0078	<0.005	0.0078		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
		0445_SD346_240402	Normal	EM2405446	0.0037	<0.0002	0.0037		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
SD355	13 Oct 2017	0445S_SD355_0.0_171012	Normal	ES1725991	0.0120	<0.0002	0.0128		<0.0002	<0.0002	0.0008	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	04 May 2022	0445_SD355_220504	Normal	EM2208381	0.0010	<0.0002	0.0010		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	04 May 2023	0445_SD355_230504	Normal	EM2308015	0.0011	<0.0002	0.0011		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	02 Apr 2024	0445_QC103_240402	Field_D	EM2405446	0.0012	<0.0002	0.0012		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
		0445_QC203_240402	Interlab_D	1086312	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
		0445_SD355_240402	Normal	EM2405446	0.0010	<0.0002	0.0010		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
SD375	23 Oct 2017	0445N_SD375_0.0_171023	Normal	ES1726698	0.0114	<0.0002	0.0118		<0.0002	<0.0002	0.0004	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	06 May 2022	0445_SD375_220506	Normal	EM2208381	0.0042	<0.0002	0.0044		<0.0002	<0.0002	0.0002	<0.0002	0.0005	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	05 May 2023	0445_QC110_230505	Field_D	EM2308015	0.0021	<0.0002	0.0021		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
		0445_QC210_230505	Interlab_D	987797	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
		0445_SD375_230505	Normal	EM2308015	0.0032	<0.0002	0.0032		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	04 Apr 2024	0445_SD375_240404	Normal	EM2405446	0.0035	<0.0002	0.0035		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
SD382	24 Oct 2017	0445N_SD382_0.0_171024	Normal	ES1726816	0.0011	<0.0002	0.0011		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	03 May 2022	0445_SD382_220503	Normal	EM2208381	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	05 May 2023	0445_QC108_230505	Field_D	EM2308015	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
		0445_QC208_230505	Interlab_D	987797	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
		0445_SD382_230505	Normal	EM2308015	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	04 Apr 2024	0445_SD382_240404	Normal	EM2405446	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
SD395	09 Oct 2017	0445_QC152_171009	Field_D	ES1725705	0.0019	<0.0002	0.0022		<0.0002	<0.0002	0.0003	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
		0445_SD395_0.0_171010	Normal	ES1725705	0.0016	<0.0002	0.0016		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	10 Oct 2017	0445_QC252_171010	Interlab_D	567888	0.011	<0.001	0.0121		<0.001	<0.001	0.0011	<0.001	<0.001	<0.005	<0.001	<0.001		<0.001	<0.001	<0.001	
	03 Nov 2019	0445_SD395_0.0_191103	Normal	ES1936497	0.0029	<0.0002	0.0033		<0.0002	<0.0002	0.0004	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	03 May 2022	0445_SD395_220503	Normal	EM2208382	0.0056	<0.0002	0.0059		<0.0002	<0.0002	0.0003	<0.0002	0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	06 May 2023	0445_SD395_230506	Normal	EM2308009	0.0020	<0.0002	0.0020		<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
	05 Apr 2024	0445_SD395_240405	Normal	EM2405435	0.0040	<0.0002	0.0044		<0.0002	<0.0002	0.0004	<0.0002	0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
SD396	10 Oct 2017	0445_SD396_0.0_171010	Normal	ES1725715	0.0116	<0.0002	0.0162		0.0005	0.0003	0.0046	<0.0002	<0.0002	<0.001	<0.0002	0.0002		<0.0002	<0.0002	<0.0002	
	03 Nov 2019	0445_SD396_0.0_191103	Normal	ES1936497	0.0421	0.0003	0.0545		0.0010	0.0007	0.0124	0.0011	<0.0002	<0.001	<0.0002	0.0006		<0.0002	<0.0002	<0.0002	
	03 May 2022	0445_SD396_220503	Normal	EM2208382	0.0180	<0.0002	0.0373		0.0008	0.0014	0.0193	0.0009	<0.0002	<0.001	<0.0002	0.0009		<0.0002	<0.0002	<0.0002	
	06 May 2023	0445_SD396_ 230506	Normal	EM2308004	0.0162	<0.0002	0.0223		0.0003	0.0004	0.0061	0.0004	<0.0002	<0.001	<0.0002	0.0003		<0.0002	<0.0002	<0.0002	
	05 Apr 2024	0445_SD396_240405	Normal	EM2405437	0.0304	0.0003	0.0408		0.0005	0.0006	0.0104	0.0007	<0.0002	<0.001	<0.0002	0.0006		<0.0002	<0.0002	<0.0002	
SD397	10 Oct 2017	0445_SD397_0.0_171010	Normal	ES1725715	0.0263	0.0017	0.0527		0.0026	0.0028	0.0264	0.0024	<0.0002	<0.001	0.0006	0.0042		0.0008	<0.0002	<0.0002	
		0445_SD397_0.4_171010	Normal	ES1725715	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	
		0445_SD397_0.7_171010	Normal	ES1725715	0.0026	0.0003	0.0042		0.0004	0.0002	0.0016	<0.0002	<0.0002	<0.001	<0.0002	0.0008		<0.0002	<0.0002	<0.0002	
	03 Nov 2019	0445_QC136_191103	Field_D	ES1936497	0.0324	0.0006	0.0387		0.0007	0.0007	0.0063	0.0009	<0.0002	<0.001	0.0002	0.0019		0.0002	<0.0002	<0.0002	
		0445_SD397_0.0_191103	Normal	ES1936497	0.0280	0.0005	0.0336		0.0006	0.0006	0.0056	0.0008	<0.0002	<0.001	0.0002	0.0016		<0.0002	<0.0002	<0.0002	
	03 May 2022	0445_SD397_220503	Normal	EM2208382	0.0196	0.0004	0.0442		0.0008	0.0021	0.0246	0.0016	<0.0002	<0.001	<0.0002	0.0008		0.0002	<0.0002	<0.0002	
	06 May 2023	0445_SD397_230506	Normal	EM2308004	0.0666	0.0021	0.0861		0.0007	0.0016	0.0195	0.0041	<0.0002	<0.001	0.0003	0.0027		0.0007	<0.0002	<0.0002	
	05 Apr 2024	0445_SD397_240405	Normal	EM2405437	0.0586	0.0005	0.0633		0.0003	0.0004	0.0047	0.0008	<0.0002	<0.001	<0.0002	0.0009		<0.0002	<0.0002	<0.0002	

					Perfluorocarbons																
					Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoate (PFOA)	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoropropanesulfonic acid (PFPrS)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR					0.0002	0.0002	0.0002	0.005	0.0002	0.0002	0.0002	0.0002	0.0002	0.001	0.0002	0.0002	0.005	0.0002	0.0002	0.0002
Location Code	**Date**	**Field ID**	**Sample Type**	**Lab Report Number**																	
SD400	**10 Oct 2017**	**0445_SD400_0.0_171010**	**Normal**	**ES1725715**	0.0016	<0.0002	0.0031		0.0002	<0.0002	0.0015	<0.0002	<0.0002	<0.001	<0.0002	0.0003		<0.0002	<0.0002	<0.0002
	03 Nov 2019	**0445_SD400_0.0_191103**	**Normal**	**ES1936497**	0.0078	<0.0002	0.0092		<0.0002	<0.0002	0.0014	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
	03 May 2022	**0445_SD400_220503**	**Normal**	**EM2208383**	0.0117	<0.0002	0.0144		<0.0002	<0.0002	0.0027	0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
	06 May 2023	**0445_SD400_230506**	**Normal**	**EM2308004**	0.0163	<0.0002	0.0193		<0.0002	<0.0002	0.0030	<0.0002	<0.0002	<0.001	<0.0002	0.0002		<0.0002	<0.0002	<0.0002
	05 Apr 2024	**0445_SD400_240405**	**Normal**	**EM2405437**	0.0170	<0.0002	0.0210		0.0002	0.0003	0.0040	0.0005	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
SD412	**12 Oct 2017**	**0445_SD412_0.0_171012**	**Normal**	**ES1725997**	0.0028	<0.0002	0.0038		<0.0002	<0.0002	0.0010	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
	06 May 2022	**0445_SD412_220506**	**Normal**	**EM2208383**	0.0014	<0.0002	0.0014		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
	05 May 2023	**0445_SD412_230505**	**Normal**	**EM2308009**	0.0020	<0.0002	0.0020		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
	04 Apr 2024	**0445_SD412_240404**	**Normal**	**EM2405435**	0.0024	<0.0002	0.0024		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
SD424	**10 Oct 2017**	**0445_QC214**	**Interlab_D**	**567942**	0.016	<0.005	0.016		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
	11 Oct 2017	**0445_QC114**	**Field_D**	**ES1725716**	0.0012	<0.0002	0.0019		<0.0002	<0.0002	0.0007	<0.0002	<0.0002	<0.001	<0.0002	0.0005		<0.0002	<0.0002	<0.0002
		0445_SD424_0.0_171011	**Normal**	**ES1725716**	0.0011	<0.0002	0.0016		<0.0002	<0.0002	0.0005	<0.0002	<0.0002	<0.001	<0.0002	0.0003		<0.0002	<0.0002	<0.0002
	13 Oct 2017	**0445_SD424_0.0_171013**	**Normal**	**ES1725997**	0.0062	0.0006	0.0069		<0.0002	<0.0002	0.0007	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
	04 May 2022	**0445_SD424_220504**	**Normal**	**EM2208383**	0.0038	<0.0002	0.0041		<0.0002	<0.0002	0.0003	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
	02 May 2023	**0445_SD424_230502**	**Normal**	**EM2308009**	0.0033	<0.0002	0.0035		<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
	05 Apr 2024	**0445_SD424_240405**	**Normal**	**EM2405435**	0.0145	<0.0002	0.0150		<0.0002	<0.0002	0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
SD463	**11 Dec 2017**	**0445_SD463_0.0_171211**	**Normal**	**ES1731468**	0.0050	<0.0002	0.0056		<0.0002	<0.0002	0.0006	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
	04 May 2022	**0445_QC110_220504**	**Field_D**	**EM2208383**	0.0086	<0.0002	0.0091		<0.0002	<0.0002	0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
		0445_QC210_220504	**Interlab_D**	**886780**	0.013	<0.005	0.013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
		0445_SD463_220504	**Normal**	**EM2208383**	0.0085	<0.0002	0.0088		<0.0002	<0.0002	0.0003	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
	02 May 2023	**0445_SD463_230502**	**Normal**	**EM2308009**	0.0048	<0.0002	0.0051		<0.0002	<0.0002	0.0003	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
	05 Apr 2024	**0445_SD463_240405**	**Normal**	**EM2405435**	0.0091	<0.0002	0.0097		<0.0002	<0.0002	0.0006	<0.0002	<0.0002	<0.001	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002

Notes

Denotes first time detection above LOR in latest monitoring round

Denotes new exceedance of lowest adopted screening criteria in latest monitoring round

					Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR					0.0002	0.0002	0.0002	0.0005	0.0002	0.0005	0.0005	0.0005	0.0005	0.0002	0.0002	0.0005	0.0005	0.0005	0.0005	0.0002	0.005	0.005
Location Code	Date	Field ID	Sample Type	Lab Report Number																			
SD323	17 Oct 2017	0445S_SD323_0.0_171017	Normal	ES1726190	<0.0002	<0.0002	<0.0002	<0.0005	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0363		
	04 May 2022	0445_QC209_220504	Interlab_D	886780	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.05	0.016	0.016
		0445_SD323_220504	Normal	EM2208381	0.0003	<0.0002	0.0004	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0184		
		0445_QC109_220504	Field_D	EM2208381	0.0002	<0.0002	0.0005	<0.0005	0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0171		
	04 May 2023	0445_SD323_230504	Normal	EM2308015	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0140		
	05 Apr 2024	0445_SD323_240405	Normal	EM2405446	<0.0002	<0.0002	0.0002	<0.0005	0.0003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0235		
SD346	13 Oct 2017	0445S_SD346_0.0_171013	Normal	ES1725991	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0161		
	04 May 2022	0445_SD346_220504	Normal	EM2208381	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0043		
	05 May 2023	0445_SD346_230505	Normal	EM2308015	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0114		
	02 Apr 2024	0445_QC102_240402	Field_D	EM2405446	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0056		
		0445_QC202_240402	Interlab_D	1086312	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.05	0.0078	0.0078
		0445_SD346_240402	Normal	EM2405446	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0037		
SD355	13 Oct 2017	0445S_SD355_0.0_171012	Normal	ES1725991	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0128		
	04 May 2022	0445_SD355_220504	Normal	EM2208381	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0010		
	04 May 2023	0445_SD355_230504	Normal	EM2308015	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0011		
	02 Apr 2024	0445_QC102_240402	Field_D	EM2405446	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0012		
		0445_QC203_240402	Interlab_D	1086312	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.05	<0.005	<0.005
		0445_SD355_240402	Normal	EM2405446	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0010		
SD375	23 Oct 2017	0445N_SD375_0.0_171023	Normal	ES1726698	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0118		
	06 May 2022	0445_SD375_220506	Normal	EM2208381	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0049		
	05 May 2023	0445_QC110_230505	Field_D	EM2308015	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0021		
		0445_QC210_230505	Interlab_D	987797	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.05	<0.005	<0.005
		0445_SD375_230505	Normal	EM2308015	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0032		
	04 Apr 2024	0445_SD375_240404	Normal	EM2405446	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0035		
SD382	24 Oct 2017	0445N_SD382_0.0_171024	Normal	ES1726816	<0.0002	0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0013		
	03 May 2022	0445_SD382_220503	Normal	EM2208381	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002			
	05 May 2023	0445_QC108_230505	Field_D	EM2308015	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002			
		0445_QC208_230505	Interlab_D	987797	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.05	<0.005	<0.005
		0445_SD382_230505	Normal	EM2308015	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002			
	04 Apr 2024	0445_SD382_240404	Normal	EM2405446	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002			
SD395	09 Oct 2017	0445_QC152_171009	Field_D	ES1725705	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0022		
		0445_SD395_0.0_171010	Normal	ES1725705	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0016		
	10 Oct 2017	0445_QC252_171010	Interlab_D	567888	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.05			
	03 Nov 2019	0445_SD395_0.0_191103	Normal	ES1936497	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0033		
	03 May 2022	0445_SD395_220503	Normal	EM2208382	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0061		
	06 May 2023	0445_SD395_230506	Normal	EM2308009	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0022		
	05 Apr 2024	0445_SD395_240405	Normal	EM2405435	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0046		
SD396	10 Oct 2017	0445_SD396_0.0_171010	Normal	ES1725715	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0172		
	03 Nov 2019	0445_SD396_0.0_191103	Normal	ES1936497	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0582		
	03 May 2022	0445_SD396_220503	Normal	EM2208382	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0413		
	06 May 2023	0445_SD396_ 230506	Normal	EM2308004	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0237		
	05 Apr 2024	0445_SD396_240405	Normal	EM2405437	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0438		
SD397	10 Oct 2017	0445_SD397_0.0_171010	Normal	ES1725715	<0.0002	<0.0002	<0.0002	<0.0006	<0.0002	<0.0006	<0.0006	<0.0006	<0.0006	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0678		
		0445_SD397_0.4_171010	Normal	ES1725715	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002		
		0445_SD397_0.7_171010	Normal	ES1725715	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0059		
	03 Nov 2019	0445_QC136_191103	Field_D	ES1936497	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0439		
		0445_SD397_0.0_191103	Normal	ES1936497	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0379		
	03 May 2022	0445_SD397_220503	Normal	EM2208382	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0501		
	06 May 2023	0445_SD397_230506	Normal	EM2308004	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0983		
	05 Apr 2024	0445_SD397_240405	Normal	EM2405437	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0662		

					Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FtS)	8:2 Fluorotelomer sulfonate (8:2 FtS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFAS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR					0.0002	0.0002	0.0002	0.0005	0.0002	0.0005	0.0005	0.0005	0.0005	0.0002	0.0002	0.0005	0.0005	0.0005	0.0005	0.0002	0.005	0.005
Location Code	Date	Field ID	Sample Type	Lab Report Number																		
SD400	10 Oct 2017	0445_SD400_0.0_171010	Normal	ES1725715	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0036		
	03 Nov 2019	0445_SD400_0.0_191103	Normal	ES1936497	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0092		
	03 May 2022	0445_SD400_220503	Normal	EM2208383	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0146		
	06 May 2023	0445_SD400_230506	Normal	EM2308004	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0004	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	0.0205		
	05 Apr 2024	0445_SD400_240405	Normal	EM2405437	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0220		
SD412	12 Oct 2017	0445_SD412_0.0_171012	Normal	ES1725997	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0038		
	06 May 2022	0445_SD412_220506	Normal	EM2208383	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0014		
	05 May 2023	0445_SD412_230505	Normal	EM2308009	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0020		
	04 Apr 2024	0445_SD412_240404	Normal	EM2405435	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0024		
SD424	10 Oct 2017	0445_QC214	Interlab_D	567942	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.05		
	11 Oct 2017	0445_QC114	Field_D	ES1725716	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0024		
		0445_SD424_0.0_171011	Normal	ES1725716	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0019		
	13 Oct 2017	0445_SD424_0.0_171013	Normal	ES1725997	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0075		
	04 May 2022	0445_SD424_220504	Normal	EM2208383	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0041		
	02 May 2023	0445_SD424_230502	Normal	EM2308009	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0035		
	05 Apr 2024	0445_SD424_240405	Normal	EM2405435	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0150		
SD463	11 Dec 2017	0445_SD463_0.0_171211	Normal	ES1731468	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0056		
	04 May 2022	0445_QC110_220504	Field_D	EM2208383	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0091		
		0445_QC210_220504	Interlab_D	886780	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.05	0.013	0.013
		0445_SD463_220504	Normal	EM2208383	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0088		
	02 May 2023	0445_SD463_230502	Normal	EM2308009	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0051		
	05 Apr 2024	0445_SD463_240405	Normal	EM2405435	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0097		

Notes

Denotes first time detection above LOR in latest monitoring round

Denotes new exceedance of lowest adopted screening criteria in latest monitoring round

Table B4a: RPDs - Groundwater and Surface Water

			Date	02 Apr 2024			02 Apr 2024			02 Apr 2024		
			Field ID	0445_SW326_240402	0445_QC100_240402		0445_SW326_240402	0445_QC200_240402		0445_SW349_240402	0445_QC101_240402	
			Matrix Type	Water	Water		Water	Water		Water	Water	
			Lab Report Number	EM2405446	EM2405446	RPD	EM2405446	1086312	RPD	EM2405446	EM2405446	RPD
	Unit	EQL										
Perfluorocarbons												
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.26	0.27	4	0.26	0.27	4	0.83	0.82	1
Perfluorooctanoate (PFOA)	µg/L	0.01	0.01	0.01	0	0.01	0.02	67	0.05	0.05	0
Sum of PFHxS and PFOS	µg/L	0.01	0.45	0.45	0	0.45	0.43	5	1.10	1.09	1
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01	0.05	0.05	0	0.05	0.04	22	0.05	0.05	0
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01	<0.02	<0.02	0	<0.02	0.01	0	0.04	0.03	29
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.19	0.18	5	0.19	0.16	17	0.27	0.27	0
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.01	0.06	0.05	18	0.06	0.06	0	0.08	0.08	0
Perfluorohexanoic acid (PFHxA)	µg/L	0.01	0.05	0.06	18	0.05	0.05	0	0.10	0.10	0
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02					0.05				
Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	<0.02	<0.02	0	<0.02	0.01	0	0.04	0.04	0
Perfluorononanoic acid (PFNA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorodecanoic acid (PFDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.01	<0.05	<0.05	0	<0.05	<0.01	0	T	<0.05	0
6:2 Fluorotelomer Sulfonate (6:2 FtS)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
8:2 Fluorotelomer sulfonate (8:2 FtS)	µg/L	0.01	<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	0.01	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0
Sum of PFAS	µg/L	0.01	0.62	0.62	0	0.62	0.67	8	1.46	1.44	1
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.01					0.29				
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	ug/L	0.01					0.45				

*RPDs have only been considered where a concentration is greater than 1 times the LOR.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each LOR multiplier range are: 81 (1 - 10 x LOR); 50 (10 - 30 x LOR); 30 (> 30 x LOR))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table B4a: RPDs - Groundwater and Surface Water

			Date	02 Apr 2024			03 Apr 2024			03 Apr 2024		
			Field ID	0445_SW349_240402	0445_QC201_240402		0445_SW324_240403	0445_QC104_240403		0445_SW324_240403	0445_QC204_240403	
			Matrix Type	Water	Water		Water	Water		Water	Water	
			Lab Report Number	EM2405446	1086312	RPD	EM2405446	EM2405446	RPD	EM2405446	1086312	RPD
	Unit	EQL										
Perfluorocarbons												
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01		0.83	0.99	18	1.21	1.18	3	1.21	1.1	10
Perfluorooctanoate (PFOA)	µg/L	0.01		0.05	0.06	18	0.06	0.07	15	0.06	0.07	15
Sum of PFHxS and PFOS	µg/L	0.01		1.10	1.21	10	1.87	1.83	2	1.87	1.67	11
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01		0.05	0.05	0	0.06	0.06	0	0.06	0.06	0
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01		0.04	0.03	29	0.04	0.05	22	0.04	0.04	0
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01		0.27	0.22	20	0.66	0.65	2	0.66	0.57	15
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01		<0.02	0.02	0	<0.02	<0.02	0	<0.02	0.02	0
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorobutanoic acid (PFBA)	µg/L	0.05		<0.1	<0.05	0	<0.1	<0.1	0	<0.1	0.06	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.01		0.08	0.09	12	0.13	0.12	8	0.13	0.14	7
Perfluorohexanoic acid (PFHxA)	µg/L	0.01		0.10	0.11	10	0.14	0.15	7	0.14	0.14	0
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02			0.03						0.03	
Perfluoroheptanoic acid (PFHpA)	µg/L	0.01		0.04	0.04	0	0.07	0.06	15	0.07	0.07	0
Perfluorononanoic acid (PFNA)	µg/L	0.01		<0.02	0.02	0	<0.02	<0.02	0	<0.02	0.02	0
Perfluorodecanoic acid (PFDA)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01		<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02		<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02		<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02		<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.01		<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
6:2 Fluorotelomer Sulfonate (6:2 FtS)	µg/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
8:2 Fluorotelomer sulfonate (8:2 FtS)	µg/L	0.01		<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	0.01		<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
Sum of PFAS	µg/L	0.01		1.46	1.66	13	2.37	2.34	1	2.37	2.32	2
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.01			1.05						1.17	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	ug/L	0.01			1.27						1.74	

*RPDs have only been considered where a concentration is greater than 1 times the LOR.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each LOf
***Interlab Duplicates are matched on a per compound basis as methods vary between labora

Table B4a: RPDs - Groundwater and Surface Water

			Date	04 Apr 2024			04 Apr 2024			04 Apr 2024		
			Field ID	0445_MW350_D_240404	0445_QC105_240404		0445_MW350_D_240404	0445_QC205_240404		0445_MW056_240404	0445_QC109_240404	
			Matrix Type	Water	Water		Water	Water		Water	Water	
			Lab Report Number	EM2405446	EM2405446	RPD	EM2405446	1086312	RPD	EM2405446	EM2405446	RPD
	Unit	EQL										
Perfluorocarbons												
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.38	0.36	5	0.38	0.35	8	0.53	0.53	0	
Perfluorooctanoate (PFOA)	µg/L	0.01	0.02	0.02	0	0.02	0.02	0	0.10	0.10	0	
Sum of PFHxS and PFOS	µg/L	0.01	0.64	0.63	2	0.64	0.55	15	1.23	1.25	2	
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01	0.04	0.06	40	0.04	0.03	29	0.13	0.14	7	
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01	0.03	0.03	0	0.03	0.03	0	0.16	0.16	0	
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.26	0.27	4	0.26	0.20	26	0.70	0.72	3	
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	0.02	<0.02	0	0.02	0.02	0	0.04	0.03	29	
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	
Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	
Perfluoropentanoic acid (PFPeA)	µg/L	0.01	<0.02	<0.02	0	<0.02	0.01	0	0.03	0.03	0	
Perfluorohexanoic acid (PFHxA)	µg/L	0.01	0.06	0.05	18	0.06	0.05	18	0.14	0.14	0	
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02					0.01					
Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	0.06	0.06	0	
Perfluorononanoic acid (PFNA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	
Perfluorodecanoic acid (PFDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	
Perfluorododecanoic acid (PFDoDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.01	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	
6:2 Fluorotelomer Sulfonate (6:2 FtS)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	
8:2 Fluorotelomer sulfonate (8:2 FtS)	µg/L	0.01	<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	0.01	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	
Sum of PFAS	µg/L	0.01	0.81	0.79	3	0.81	0.72	12	1.89	1.91	1	
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.01					0.37					
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	ug/L	0.01					0.57					

*RPDs have only been considered where a concentration is greater than 1 times the LOR.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each LOf
***Interlab Duplicates are matched on a per compound basis as methods vary between labora

Table B4a: RPDs - Groundwater and Surface Water

			Date	04 Apr 2024			04 Apr 2024			04 Apr 2024		
			Field ID	0445_MW056_240404	0445_QC209_240404		0445_SW375_240404	0445_QC110_240404		0445_SW375_240404	0445_QC210_240404	
			Matrix Type	Water	Water		Water	Water		Water	Water	
			Lab Report Number	EM2405446	1086312	RPD	EM2405446	EM2405446	RPD	EM2405446	1086312	RPD
	Unit	EQL										
Perfluorocarbons												
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.53	0.59	11	0.05	0.05	0	0.05	0.07	33
Perfluorooctanoate (PFOA)	µg/L	0.01	0.10	0.12	18	<0.01	<0.01	0	<0.01	<0.01	0
Sum of PFHxS and PFOS	µg/L	0.01	1.23	1.14	8	0.07	0.08	13	0.07	0.09	25
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01	0.13	0.15	14	<0.02	<0.02	0	<0.02	<0.01	0
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01	0.16	0.14	13	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.70	0.55	24	0.02	0.03	40	0.02	0.02	0
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	0.04	0.03	29	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.01	0.03	0.03	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorohexanoic acid (PFHxA)	µg/L	0.01	0.14	0.13	7	<0.02	<0.02	0	<0.02	<0.01	0
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02		0.02						<0.01	
Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	0.06	0.06	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorononanoic acid (PFNA)	µg/L	0.01	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorodecanoic acid (PFDA)	µg/L	0.01	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.01	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.01	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
6:2 Fluorotelomer Sulfonate (6:2 FtS)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
8:2 Fluorotelomer sulfonate (8:2 FtS)	µg/L	0.01	<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	0.01	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
Sum of PFAS	µg/L	0.01	1.89	1.82	4	0.07	0.08	13	0.07	<0.1	0
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.01		0.71						0.07	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	ug/L	0.01		1.26						0.09	

*RPDs have only been considered where a concentration is greater than 1 times the LOR.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each LOf
***Interlab Duplicates are matched on a per compound basis as methods vary between labora

Table B4a: RPDs - Groundwater and Surface Water

			Date	04 Apr 2024			04 Apr 2024			04 Apr 2024		
			Field ID	0445_SW382_240404	0445_QC106_240404		0445_SW382_240404	0445_QC206_240404		0445_MW046_I_240404	0445_QC108_240404	
			Matrix Type	Water	Water		Water	Water		Water	Water	
			Lab Report Number	EM2405446	EM2405446	RPD	EM2405446	1086312	RPD	EM2405446	EM2405446	RPD
	Unit	EQL										
Perfluorocarbons												
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	2.30	1.97	15
Perfluorooctanoate (PFOA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	0.08	0.07	13
Sum of PFHxS and PFOS	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	4.08	3.92	4
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	0.13	0.12	8
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	0.18	0.19	5
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	1.78	1.95	9
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	0.11	0.07	44
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.01	<0.02	<0.02	0	<0.02	0.02	0	0.06	0.06	0
Perfluorohexanoic acid (PFHxA)	µg/L	0.01	0.02	0.02	0	0.02	0.02	0	0.26	0.27	4
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02					<0.01				
Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	<0.02	<0.02	0	<0.02	0.01	0	0.03	0.03	0
Perfluorononanoic acid (PFNA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorodecanoic acid (PFDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.01	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0
6:2 Fluorotelomer Sulfonate (6:2 FtS)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
8:2 Fluorotelomer sulfonate (8:2 FtS)	µg/L	0.01	<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	0.01	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0
Sum of PFAS	µg/L	0.01	0.02	0.02	0	0.02	<0.1	0	4.93	4.73	4
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.01					<0.01				
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	ug/L	0.01					<0.01				

*RPDs have only been considered where a concentration is greater than 1 times the LOR.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each LOf
***Interlab Duplicates are matched on a per compound basis as methods vary between labora

Table B4a: RPDs - Groundwater and Surface Water

			Date	04 Apr 2024			04 Apr 2024			04 Apr 2024		
			Field ID	0445_MW046_I_240404	0445_QC208_240404		0445_MW354_240404	0445_QC107_240404		0445_MW354_240404	0445_QC207_240404	
			Matrix Type	Water	Water		Water	Water		Water	Water	
			Lab Report Number	EM2405446	1086312	RPD	EM2405446	EM2405446	RPD	EM2405446	1086312	RPD
	Unit	EQL										
Perfluorocarbons												
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01		2.30	2.1	9	0.03	0.05	50	0.03	0.03	0
Perfluorooctanoate (PFOA)	µg/L	0.01		0.08	0.08	0	<0.01	<0.01	0	<0.01	<0.01	0
Sum of PFHxS and PFOS	µg/L	0.01		4.08	3.6	12	0.05	0.08	46	0.05	0.05	0
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01		0.13	0.14	7	<0.02	<0.02	0	<0.02	<0.01	0
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01		0.18	0.16	12	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01		1.78	1.5	17	0.02	0.03	40	0.02	0.02	0
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01		0.11	0.08	32	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorobutanoic acid (PFBA)	µg/L	0.05		<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.01		0.06	0.06	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorohexanoic acid (PFHxA)	µg/L	0.01		0.26	0.24	8	<0.02	<0.02	0	<0.02	<0.01	0
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02			0.06						<0.01	
Perfluoroheptanoic acid (PFHpA)	µg/L	0.01		0.03	0.03	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorononanoic acid (PFNA)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorodecanoic acid (PFDA)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01		<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02		<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02		<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02		<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.01		<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
6:2 Fluorotelomer Sulfonate (6:2 FtS)	µg/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
8:2 Fluorotelomer sulfonate (8:2 FtS)	µg/L	0.01		<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	0.01		<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
Sum of PFAS	µg/L	0.01		4.93	4.45	10	0.05	0.08	46	0.05	<0.1	0
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.01			2.18						0.03	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	ug/L	0.01			3.68						0.05	

*RPDs have only been considered where a concentration is greater than 1 times the LOR.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each LOR
***Interlab Duplicates are matched on a per compound basis as methods vary between labora

Table B4a: RPDs - Groundwater and Surface Water

			Date	30 May 2024			30 May 2024			31 May 2024		
			Field ID	0445_MW411_240530	0445_QC100_240530		0445_MW411_240530	0445_QC200_240530		0445_SW332_240531	0445_QC101_240531	
			Matrix Type	Water	Water		Water	Water		Water	Water	
			Lab Report Number	EM2409333	EM2409333	RPD	EM2409333	1105323	RPD	EM2409333	EM2409333	RPD
	Unit	EQL										
Perfluorocarbons												
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.08	0.08	0	0.08	0.10	22	0.53	0.50	6
Perfluorooctanoate (PFOA)	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	0.02	0.02	0
Sum of PFHxS and PFOS	µg/L	0.01	0.15	0.18	18	0.15	0.18	18	0.94	0.93	1
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01	<0.02	<0.02	0	<0.02	0.02	0	0.14	0.14	0
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01	<0.02	<0.02	0	<0.02	0.01	0	0.07	0.07	0
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.07	0.10	35	0.07	0.08	13	0.41	0.43	5
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	0.10	0.09	11
Perfluorohexanoic acid (PFHxA)	µg/L	0.01	<0.02	<0.02	0	<0.02	0.01	0	0.24	0.23	4
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	<0.02	<0.02	0	<0.02	0.02	0	0.10	0.10	0
Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorononanoic acid (PFNA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorodecanoic acid (PFDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.01	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0
6:2 Fluorotelomer Sulfonate (6:2 FtS)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
8:2 Fluorotelomer sulfonate (8:2 FtS)	µg/L	0.01	<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	0.01	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0
Sum of PFAS	µg/L	0.01	0.15	0.18	18	0.15	0.24	46	1.61	1.58	2
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.01					0.1				
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	ug/L	0.01					0.18				

*RPDs have only been considered where a concentration is greater than 1 times the LOR.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each LOf
***Interlab Duplicates are matched on a per compound basis as methods vary between labora

Table B4a: RPDs - Groundwater and Surface Water

			Date	31 May 2024			31 May 2024			31 May 2024		
			Field ID	0445_SW332_240531	0445_QC201_240531		0445_SW340_240531	0445_QC102_240531		0445_SW340_240531	0445_QC202_240531	
			Matrix Type	Water	Water		Water	Water		Water	Water	
			Lab Report Number	EM2409333	1105323	RPD	EM2409333	EM2409333	RPD	EM2409333	1105323	RPD
	Unit	EQL										
Perfluorocarbons												
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01		0.53	0.64	19	1.84	1.84	0	1.84	2.4	26
Perfluorooctanoate (PFOA)	µg/L	0.01		0.02	0.02	0	0.13	0.14	7	0.13	0.15	14
Sum of PFHxS and PFOS	µg/L	0.01		0.94	1.08	14	2.30	2.30	0	2.30	2.89	23
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01		0.14	0.17	19	0.06	0.05	18	0.06	0.05	18
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01		0.07	0.09	25	0.04	0.04	0	0.04	0.05	22
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01		0.41	0.44	7	0.46	0.46	0	0.46	0.49	6
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01		<0.02	0.01	0	0.03	0.03	0	0.03	0.03	0
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	0.01	0
Perfluorobutanoic acid (PFBA)	µg/L	0.05		<0.1	0.11	10	<0.1	<0.1	0	<0.1	0.10	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.01		0.10	0.09	11	0.12	0.12	0	0.12	0.14	15
Perfluorohexanoic acid (PFHxA)	µg/L	0.01		0.24	0.24	0	0.19	0.19	0	0.19	0.21	10
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02		0.10	0.09	11	<0.02	<0.02	0	<0.02	0.02	0
Perfluoroheptanoic acid (PFHpA)	µg/L	0.01		<0.02	0.02	0	0.13	0.14	7	0.13	0.16	21
Perfluorononanoic acid (PFNA)	µg/L	0.01		<0.02	<0.01	0	0.04	0.04	0	0.04	0.06	40
Perfluorodecanoic acid (PFDA)	µg/L	0.01		<0.02	<0.01	0	0.03	0.04	29	0.03	0.05	50
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	0.02	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01		<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01		<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02		<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02		<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02		<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.01		<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
6:2 Fluorotelomer Sulfonate (6:2 FtS)	µg/L	0.05		<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
8:2 Fluorotelomer sulfonate (8:2 FtS)	µg/L	0.01		<0.05	<0.01	0	0.06	0.06	0	0.06	0.07	15
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.01		<0.05	<0.01	0	<0.05	<0.05	0	<0.05	0.02	0
Sum of PFAS	µg/L	0.01		1.61	1.92	18	3.13	3.15	1	3.13	4.04	25
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.01			0.66						2.55	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	ug/L	0.01			1.1						3.04	

*RPDs have only been considered where a concentration is greater than 1 times the LOR.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each LOR
***Interlab Duplicates are matched on a per compound basis as methods vary between labora

Table B4b: RPDs - Sediment

			Date	02 Apr 2024			02 Apr 2024			02 Apr 2024			02 Apr 2024		
			Field ID	0445_SD346_240402	0445_QC102_240402		0445_SD346_240402	0445_QC202_240402		0445_SD355_240402	0445_QC103_240402		0445_SD355_240402	0445_QC203_240402	
			Matrix Type	sediment	sediment		sediment	sediment		sediment	sediment		sediment	sediment	
			Lab Report Number	EM2405446	EM2405446	RPD	EM2405446	1086312	RPD	EM2405446	EM2405446	RPD	EM2405446	1086312	RPD
	Unit	EQL													
Perfluorocarbons															
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002		0.0037	0.0056	41	0.0037	0.0078	**71**	0.0010	0.0012	18	0.0010	<0.005	0
Perfluorooctanoate (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
Sum of PFHxS and PFOS	mg/kg	0.0002		0.0037	0.0056	41	0.0037	0.0078	**71**	0.0010	0.0012	18	0.0010	<0.005	0
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
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
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
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
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
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
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
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	0.005						<0.005						<0.005	
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
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
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
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
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
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
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
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
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
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-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
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 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 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-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
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 sulfonate (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
Sum of PFAS	mg/kg	0.0002		0.0037	0.0056	41	0.0037	<0.05	0	0.0010	0.0012	18	0.0010	<0.05	0
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.005						0.0078						<0.005	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	mg/kg	0.005						0.0078						<0.005	
NA															
Moisture Content	%	0.1		21.7	20.6	5	21.7			23.2	22.5	3	23.2		

*RPDs have only been considered where a concentration is greater than 1 times the LOR.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each LOR multiplier range are: 81 (1 - 10 x LOR); 50 (10 - 30 x LOR); 30 (> 30 x LOR))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table B5: Blanks

	Lab Report Number		1086312	EM2405446								EM2409333	
	Field ID		0445_QC503_240404	0445_QC300_240402	0445_QC302_240403	0445_QC304_240404	0445_QC306_240405	0445_QC500_240405	0445_QC501_240405	0445_QC502_240405	0445_QC300_240530	0445_QC301_240531	0445_QC500_240531
	Date		04 Apr 2024	02 Apr 2024	03 Apr 2024	04 Apr 2024	05 Apr 2024	05 Apr 2024	05 Apr 2024	05 Apr 2024	30 May 2024	31 May 2024	31 May 2024
	Sample Type		Trip_B	Rinsate	Rinsate	Rinsate	Rinsate	Trip_B	Trip_B	Trip_B	Rinsate	Rinsate	Trip_B
	Unit	EQL											
Perfluorocarbons													
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoate (PFOA)	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFHxS and PFOS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01	<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	0.01	<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	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	<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	0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	µg/L	0.01	<0.01	<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	0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	<0.01								<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	<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	0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	µg/L	0.01	<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	0.01	<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	0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01	<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	0.01	<0.01	<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	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	<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 sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.01	<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	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonate (8:2 FtS)	µg/L	0.01	<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	0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sum of PFAS	µg/L	0.01	<0.1	<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)*	mg/kg	0.01	<0.01										
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	ug/L	0.01	<0.01										

APPENDIX

C

LABORATORY CERTIFICATES

ALSCompass SAMPLING Intelligence

ALS

Environmental Division
Melbourne
Work Order Reference
EM2405446

Telephone: +61-3-8549 9600

Custody Document for Submissions via ALS Compass App

Project: VIC_0445_PFASOMP_24 Client: STANTEC Project Manager:

Phone: ( )

ALS Compass COC Reference: 65603 # Samples: Sampler:

Phone: ( )

Turnaround Requirements: Standard Urgent

Special Instructions:	ALS Use Only		
	Custody seal intact?	YES (NO)	N/A
	(Free ice) / frozen ice bricks upon receipt?	(YES) NO	N/A
	Random sample temperature on receipt?	7.1 °C	

Custody:

Relinquished by:	Received by:	Relinquished by:	Received by: [redacted]
Date / Time:	Date / Time:	Date / Time:	Date / Time: 08/04/24 — 15:40

CHAIN OF CUSTODY

COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	Analysis NOT REQUIRED	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0445_MW304_240404		04/04/2024 11:25 AM	WATER	ALS: 2 Non ALS: 0	No		X			
002	0445_MW307_240404		04/04/2024 11:52 AM	WATER	ALS: 2 Non ALS: 0	No		X			
003	0445_MW312_240404		04/04/2024 11:37 AM	WATER	ALS: 2 Non ALS: 0	No		X			
004	0445_MW342_240404		04/04/2024 12:37 PM	WATER	ALS: 2 Non ALS: 0	No		X			
005	0445_MW345_240404		04/04/2024 04:38 PM	WATER	ALS: 2 Non ALS: 0	No		X			
006	0445_MW346_240404		04/04/2024 04:41 PM	WATER	ALS: 2 Non ALS: 0	No		X			
007	0445_MW052_240404		04/04/2024 04:49 PM	WATER	ALS: 2 Non ALS: 0	No		X			

CHAIN OF CUSTODY

COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal Intact? Yes No N/A

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

Random Sample Temperature on Receipt: °C

Other comments:

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

EMAIL INVOICES TO:

SAMPLE DETAILS							ANALYSIS REQUIRED				
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Analysis NOT REQUIRED	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
008	0445_MW403_240404		05/04/2024 07:12 AM	WATER	ALS: 2 Non ALS: 0	No		X			
009	0445_MW404_240404		04/04/2024 04:49 PM	WATER	ALS: 2 Non ALS: 0	No		X			
010	0445_MW350_D_240404		04/04/2024 08:22 AM	WATER	ALS: 2 Non ALS: 0	No		X			
011	0445_MW350_S_240404		04/04/2024 07:32 AM	WATER	ALS: 2 Non ALS: 0	No		X			
012	0445_MW009_240404		04/04/2024 09:55 AM	WATER	ALS: 6 Non ALS: 0	No		X			Internal Lab qc
013	0445_MW016_240404		04/04/2024 09:01 AM	WATER	ALS: 2 Non ALS: 0	No		X			
014	0445_MW042_240404		04/04/2024 09:37 AM	WATER	ALS: 2 Non ALS: 0	No		X			

CHAIN OF CUSTODY

(ALS) COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	Analysis NOT REQUIRED	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
015	0445_MW043_240404		04/04/2024 09:30 AM	WATER	ALS: 2 Non ALS: 0	No		X			
016	0445_MW035_240404		04/04/2024 09:19 AM	WATER	ALS: 6 Non ALS: 0	No		X			
017	0445_MW034_240404		04/04/2024 04:46 PM	WATER	ALS: 2 Non ALS: 0	No		X			
018	0445_MW046_I_240404		04/04/2024 04:45 PM	WATER	ALS: 2 Non ALS: 0	No		X			
019	0445_MW046_D_240404		04/04/2024 04:46 PM	WATER	ALS: 2 Non ALS: 0	No		X			
020	0445_MW018_240404		04/04/2024 04:43 PM	WATER	ALS: 2 Non ALS: 0	No		X			
021	0445_MW020_240404		04/04/2024 04:37 PM	WATER	ALS: 2 Non ALS: 0	No		X			

CHAIN OF CUSTODY

COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	Analysis NOT REQUIRED	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
022	0445_MW012_240404		04/04/2024 10:19 AM	WATER	ALS: 2 Non ALS: 0	No		X			
023	0445_MW029_240404		04/04/2024 10:06 AM	WATER	ALS: 2 Non ALS: 0	No		X			
024	0445_MW352_240404		04/04/2024 08:31 AM	WATER	ALS: 6 Non ALS: 0	No		X			Internal Lab qc
025	0445_MW353_240404		04/04/2024 10:31 AM	WATER	ALS: 2 Non ALS: 0	No		X			
026	0445_MW354_240404		04/04/2024 04:50 PM	WATER	ALS: 2 Non ALS: 0	No		X			
027	0445_MW351_240404		04/04/2024 04:40 PM	WATER	ALS: 2 Non ALS: 0	No		X			
028	0445_SW324_240403		03/04/2024 03:21 PM	WATER	ALS: 2 Non ALS: 0	No		X			

CHAIN OF CUSTODY

(ALS) COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	Analysis NOT REQUIRED	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
029	0445_SW326_240402		02/04/2024 05:38 PM	WATER	ALS: 2 Non ALS: 0	No		X			
030	0445_SW338_240402		02/04/2024 05:40 PM	WATER	ALS: 6 Non ALS: 0	No		X			
031	0445_SW448_240402		02/04/2024 05:35 PM	WATER	ALS: 2 Non ALS: 0	No		X			
032	0445_SW346_240402	Lab Internal	02/04/2024 03:14 PM	WATER	ALS: 6 Non ALS: 0	No		X			
033	0445_SW349_240402		02/04/2024 05:40 PM	WATER	ALS: 2 Non ALS: 0	No		X			
034	0445_SW355_240403		02/04/2024 05:34 PM	WATER	ALS: 2 Non ALS: 0	No		X			
035	0445_SW374_240404		04/04/2024 04:44 PM	WATER	ALS: 2 Non ALS: 0	No		X			

CHAIN OF CUSTODY

COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	Analysis NOT REQUIRED	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
036	0445_SW375_240404		04/04/2024 04:36 PM	WATER	ALS: 2 Non ALS: 0	No		X			
037	0445_SW382_240404		04/04/2024 04:41 PM	WATER	ALS: 2 Non ALS: 0	No		X			
038	0445_SW387_240405		05/04/2024 11:37 AM	WATER	ALS: 2 Non ALS: 0	No		X			
039	0445_SD323_240405		05/04/2024 04:01 PM	SOIL	ALS: 1 Non ALS: 0	No			X		
040	0445_SD346_240402		02/04/2024 03:12 PM	SOIL	ALS: 1 Non ALS: 0	No			X		
041	0445_SD355_240402		02/04/2024 05:37 PM	SOIL	ALS: 1 Non ALS: 0	No			X		
042	0445_SD375_240404		04/04/2024 04:49 PM	SOIL	ALS: 1 Non ALS: 0	No			X		

CHAIN OF CUSTODY

(ALS) COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER: [redacted]

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	Analysis NOT REQUIRED	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
043	0445_SD382_240404		04/04/2024 08:49 AM	SOIL	ALS: 1 Non ALS: 0	No			X		
044	0445_QC102_240402		02/04/2024 03:13 PM	SOIL	ALS: 1 Non ALS: 0	No			X		
045	0445_QC100_240402		02/04/2024 05:37 PM	WATER	ALS: 2 Non ALS: 0	No		X			
046	0445_QC103_240402		02/04/2024 05:38 PM	SOIL	ALS: 1 Non ALS: 0	No			X		
047	0445_QC101_240402		02/04/2024 05:39 PM	WATER	ALS: 2 Non ALS: 0	No		X			
048	0445_QC104_240403		03/04/2024 03:22 PM	WATER	ALS: 2 Non ALS: 0	No		X			
049	0445_QC105_240404		04/04/2024 08:23 AM	WATER	ALS: 2 Non ALS: 0	No		X			

CHAIN OF CUSTODY

(ALS) COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	Analysis NOT REQUIRED	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
050	0445_MW056_240404		04/04/2024 12:17 PM	WATER	ALS: 2 Non ALS: 0	No		X			
051	0445_QC109_240404		04/04/2024 12:17 PM	WATER	ALS: 2 Non ALS: 0	No		X			
052	0445_QC107_240404		04/04/2024 04:40 PM	WATER	ALS: 2 Non ALS: 0	No		X			
053	0445_QC110_240404		04/04/2024 04:43 PM	WATER	ALS: 2 Non ALS: 0	No		X			
054	0445_QC108_240404		04/04/2024 04:45 PM	WATER	ALS: 2 Non ALS: 0	No		X			
055	0445_QC106_240404		04/04/2024 04:51 PM	WATER	ALS: 2 Non ALS: 0	No		X			
056	0445_QC300_240402		05/04/2024 03:34 PM	WATER	ALS: 2 Non ALS: 0	No		X			

CHAIN OF CUSTODY

COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	Analysis NOT REQUIRED	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
057	0445_QC301_240402		05/04/2024 03:35 PM	WATER	ALS: 2 Non ALS: 0	No	-				
058	0445_QC302_240403		05/04/2024 03:36 PM	WATER	ALS: 2 Non ALS: 0	No		X			
059	0445_QC303_240403		05/04/2024 03:37 PM	WATER	ALS: 2 Non ALS: 0	No	-				
060	0445_QC304_240404		05/04/2024 03:38 PM	WATER	ALS: 2 Non ALS: 0	No		X			
061	0445_QC305_240404		05/04/2024 03:38 PM	WATER	ALS: 2 Non ALS: 0	No	-				
062	0445_QC306_240405		05/04/2024 03:39 PM	WATER	ALS: 2 Non ALS: 0	No		X			
063	0445_QC307_240405		05/04/2024 03:40 PM	WATER	ALS: 2 Non ALS: 0	No	-				

CHAIN OF CUSTODY

(ALS) COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	Analysis NOT REQUIRED	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
084	0445_QC500_240405		05/04/2024 04:26 PM	WATER	ALS: 2 Non ALS: 0	No		X			
085	0445_QC501_240405		05/04/2024 04:27 PM	WATER	ALS: 2 Non ALS: 0	No		X			
086	0445_QC502_240405		05/04/2024 04:28 PM	WATER	ALS: 2 Non ALS: 0	No		X			
087	0445_DRUM02_01_240405		05/04/2024 04:42 PM	WATER	ALS: 2 Non ALS: 0	No		X			

CHAIN OF CUSTODY

(ALS) COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0445_MW304_240404	HDPE (no PTFE)	20 mL	00351221001981	Grey	No	
001	0445_MW304_240404	HDPE (no PTFE)	20 mL	00351221001623	Grey	No	
002	0445_MW307_240404	HDPE (no PTFE)	20 mL	00350522020271	Grey	No	
002	0445_MW307_240404	HDPE (no PTFE)	20 mL	00350522020265	Grey	No	
003	0445_MW312_240404	HDPE (no PTFE)	20 mL	00350522020441	Grey	No	
003	0445_MW312_240404	HDPE (no PTFE)	20 mL	00350522020372	Grey	No	
004	0445_MW342_240404	HDPE (no PTFE)	20 mL	00350522020422	Grey	No	
004	0445_MW342_240404	HDPE (no PTFE)	20 mL	00350522020256	Grey	No	
005	0445_MW345_240404	HDPE (no PTFE)	20 mL	00352312012485	Grey	No	
005	0445_MW345_240404	HDPE (no PTFE)	20 mL	00352312012503	Grey	No	
006	0445_MW346_240404	HDPE (no PTFE)	20 mL	00352312012558	Grey	No	
006	0445_MW346_240404	HDPE (no PTFE)	20 mL	00352312012435	Grey	No	
007	0445_MW052_240404	HDPE (no PTFE)	20 mL	00352312012520	Grey	No	
007	0445_MW052_240404	HDPE (no PTFE)	20 mL	00352312012495	Grey	No	
008	0445_MW403_240404	HDPE (no PTFE)	20 mL	00350522020459	Grey	No	
008	0445_MW403_240404	HDPE (no PTFE)	20 mL	00350522020175	Grey	No	
009	0445_MW404_240404	HDPE (no PTFE)	20 mL	00352312012514	Grey	No	
009	0445_MW404_240404	HDPE (no PTFE)	20 mL	00352312012568	Grey	No	
010	0445_MW350_D_240404	HDPE (no PTFE)	20 mL	00350522020214	Grey	No	
010	0445_MW350_D_240404	HDPE (no PTFE)	20 mL	00350522020275	Grey	No	
011	0445_MW350_S_240404	HDPE (no PTFE)	20 mL	00351221002171	Grey	No	
011	0445_MW350_S_240404	HDPE (no PTFE)	20 mL	00351221001674	Grey	No	
012	0445_MW009_240404	HDPE (no PTFE)	20 mL	00350822032983	Grey	No	
012	0445_MW009_240404	HDPE (no PTFE)	20 mL	00351221001574	Grey	No	
012	0445_MW009_240404	HDPE (no PTFE)	20 mL	00351221002074	Grey	No	
012	0445_MW009_240404	HDPE (no PTFE)	20 mL	00350522020216	Grey	No	

CHAIN OF CUSTODY

(ALS) COC#: 65603 ALS Laboratory: EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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:

012	0445_MW009_240404	HDPE (no PTFE)	20 mL	00350822033002	Grey	No	
012	0445_MW009_240404	HDPE (no PTFE)	20 mL	00350522020236	Grey	No	
013	0445_MW016_240404	HDPE (no PTFE)	20 mL	00350522020334	Grey	No	
013	0445_MW016_240404	HDPE (no PTFE)	20 mL	00350522020343	Grey	No	
014	0445_MW042_240404	HDPE (no PTFE)	20 mL	00350522020449	Grey	No	
014	0445_MW042_240404	HDPE (no PTFE)	20 mL	00350522020314	Grey	No	
015	0445_MW043_240404	HDPE (no PTFE)	20 mL	00350522020198	Grey	No	
015	0445_MW043_240404	HDPE (no PTFE)	20 mL	00350522020432	Grey	No	
016	0445_MW035_240404	HDPE (no PTFE)	20 mL	00350522020450	Grey	No	
016	0445_MW035_240404	HDPE (no PTFE)	20 mL	00350522020460	Grey	No	
016	0445_MW035_240404	HDPE (no PTFE)	20 mL	00350522020193	Grey	No	
016	0445_MW035_240404	HDPE (no PTFE)	20 mL	00350522020208	Grey	No	
016	0445_MW035_240404	HDPE (no PTFE)	20 mL	00350522020427	Grey	No	
016	0445_MW035_240404	HDPE (no PTFE)	20 mL	00350522020361	Grey	No	
017	0445_MW034_240404	HDPE (no PTFE)	20 mL	00352312012603	Grey	No	
017	0445_MW034_240404	HDPE (no PTFE)	20 mL	00352312012683	Grey	No	
018	0445_MW046_I_240404	HDPE (no PTFE)	20 mL	00352312012617	Grey	No	
018	0445_MW046_I_240404	HDPE (no PTFE)	20 mL	00352312012689	Grey	No	
019	0445_MW046_D_240404	HDPE (no PTFE)	20 mL	00352312012501	Grey	No	
019	0445_MW046_D_240404	HDPE (no PTFE)	20 mL	00352312012476	Grey	No	
020	0445_MW018_240404	HDPE (no PTFE)	20 mL	00352312012563	Grey	No	
020	0445_MW018_240404	HDPE (no PTFE)	20 mL	00352312012569	Grey	No	
021	0445_MW020_240404	HDPE (no PTFE)	20 mL	00352312012428	Grey	No	
021	0445_MW020_240404	HDPE (no PTFE)	20 mL	00352312012443	Grey	No	
022	0445_MW012_240404	HDPE (no PTFE)	20 mL	00350522020461	Grey	No	
022	0445_MW012_240404	HDPE (no PTFE)	20 mL	00350522020473	Grey	No	
023	0445_MW029_240404	HDPE (no PTFE)	20 mL	00350522020291	Grey	No	

CHAIN OF CUSTODY

(ALS) COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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:

023	0445_MW029_240404	HDPE (no PTFE)	20 mL	00350522020442	Grey	No	
024	0445_MW352_240404	HDPE (no PTFE)	20 mL	00350522020411	Grey	No	
024	0445_MW352_240404	HDPE (no PTFE)	20 mL	00350522020249	Grey	No	
024	0445_MW352_240404	HDPE (no PTFE)	20 mL	00350522020301	Grey	No	
024	0445_MW352_240404	HDPE (no PTFE)	20 mL	00350522020324	Grey	No	
024	0445_MW352_240404	HDPE (no PTFE)	20 mL	00350522020386	Grey	No	
024	0445_MW352_240404	HDPE (no PTFE)	20 mL	00350522020192	Grey	No	
025	0445_MW353_240404	HDPE (no PTFE)	20 mL	00350522020415	Grey	No	
025	0445_MW353_240404	HDPE (no PTFE)	20 mL	00350522020306	Grey	No	
026	0445_MW354_240404	HDPE (no PTFE)	20 mL	00352312012676	Grey	No	
026	0445_MW354_240404	HDPE (no PTFE)	20 mL	00352312012564	Grey	No	
027	0445_MW351_240404	HDPE (no PTFE)	20 mL	00352312012669	Grey	No	
027	0445_MW351_240404	HDPE (no PTFE)	20 mL	00352312012519	Grey	No	
028	0445_SW324_240403	HDPE (no PTFE)	20 mL	00352312012515	Grey	No	
028	0445_SW324_240403	HDPE (no PTFE)	20 mL	00352312012722	Grey	No	
029	0445_SW326_240402	HDPE (no PTFE)	20 mL	00352101030515	Grey	No	
029	0445_SW326_240402	HDPE (no PTFE)	20 mL	00352101030755	Grey	No	
030	0445_SW338_240402	HDPE (no PTFE)	20 mL	00352309066209	Grey	No	
030	0445_SW338_240402	HDPE (no PTFE)	20 mL	00352309066188	Grey	No	
030	0445_SW338_240402	HDPE (no PTFE)	20 mL	00350522020405	Grey	No	
030	0445_SW338_240402	HDPE (no PTFE)	20 mL	00350822024391	Grey	No	
030	0445_SW338_240402	HDPE (no PTFE)	20 mL	00350822024432	Grey	No	
030	0445_SW338_240402	HDPE (no PTFE)	20 mL	00350522020391	Grey	No	
031	0445_SW448_240402	HDPE (no PTFE)	20 mL	00350822076768	Grey	No	
031	0445_SW448_240402	HDPE (no PTFE)	20 mL	00350822076619	Grey	No	
032	0445_SW346_240402	HDPE (no PTFE)	20 mL	00352312012686	Grey	No	
032	0445_SW346_240402	HDPE (no PTFE)	20 mL	00352312012492	Grey	No	

CHAIN OF CUSTODY

(ALS) COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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:

032	0445_SW346_240402	HDPE (no PTFE)	20 mL	00352312012717	Grey	No	
032	0445_SW346_240402	HDPE (no PTFE)	20 mL	00352312012494	Grey	No	
032	0445_SW346_240402	HDPE (no PTFE)	20 mL	00352312012681	Grey	No	
032	0445_SW346_240402	HDPE (no PTFE)	20 mL	00352312012445	Grey	No	
033	0445_SW349_240402	HDPE (no PTFE)	20 mL	00350522020272	Grey	No	
033	0445_SW349_240402	HDPE (no PTFE)	20 mL	00350522020278	Grey	No	
034	0445_SW355_240403	HDPE (no PTFE)	20 mL	00350522020362	Grey	No	
034	0445_SW355_240403	HDPE (no PTFE)	20 mL	00350522020262	Grey	No	
035	0445_SW374_240404	HDPE (no PTFE)	20 mL	00352312012472	Grey	No	
035	0445_SW374_240404	HDPE (no PTFE)	20 mL	00352312012693	Grey	No	
036	0445_SW375_240404	HDPE (no PTFE)	20 mL	00352312012585	Grey	No	
036	0445_SW375_240404	HDPE (no PTFE)	20 mL	00352312012539	Grey	No	
037	0445_SW382_240404	HDPE (no PTFE)	20 mL	00352312012590	Grey	No	
037	0445_SW382_240404	HDPE (no PTFE)	20 mL	00352312012704	Grey	No	
038	0445_SW387_240405	HDPE (no PTFE)	20 mL	00350522020351	Grey	No	
038	0445_SW387_240405	HDPE (no PTFE)	20 mL	00350522020298	Grey	No	
039	0445_SD323_240405	HDPE Soil Jar	200 mL	00621018004077	Grey	No	
040	0445_SD346_240402	HDPE Soil Jar	200 mL	00621018004033	Grey	No	
041	0445_SD355_240402	HDPE Soil Jar	200 mL	00621018004106	Grey	No	
042	0445_SD375_240404	HDPE Soil Jar	200 mL	00621122008497	Grey	No	
043	0445_SD382_240404	HDPE Soil Jar	200 mL	00621018004018	Grey	No	
044	0445_QC102_240402	HDPE Soil Jar	200 mL	00621018004128	Grey	No	
045	0445_QC100_240402	HDPE (no PTFE)	20 mL	00350522020468	Grey	No	
045	0445_QC100_240402	HDPE (no PTFE)	20 mL	00350522020419	Grey	No	
046	0445_QC103_240402	HDPE Soil Jar	200 mL	00621018004136	Grey	No	
047	0445_QC101_240402	HDPE (no PTFE)	20 mL	00350522020378	Grey	No	
047	0445_QC101_240402	HDPE (no PTFE)	20 mL	00350522020191	Grey	No	

CHAIN OF CUSTODY

(ALS) COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

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:

048	0445_QC104_240403	HDPE (no PTFE)	20 mL	00352312012512	Grey	No	
048	0445_QC104_240403	HDPE (no PTFE)	20 mL	00352312012490	Grey	No	
049	0445_QC105_240404	HDPE (no PTFE)	20 mL	00350522020366	Grey	No	
049	0445_QC105_240404	HDPE (no PTFE)	20 mL	00350522020371	Grey	No	
050	0445_MW056_240404	HDPE (no PTFE)	20 mL	00350822009604	Grey	No	
050	0445_MW056_240404	HDPE (no PTFE)	20 mL	00350822009611	Grey	No	
051	0445_QC109_240404	HDPE (no PTFE)	20 mL	00350822009625	Grey	No	
051	0445_QC109_240404	HDPE (no PTFE)	20 mL	00350822009687	Grey	No	
052	0445_QC107_240404	HDPE (no PTFE)	20 mL	00352312012699	Grey	No	
052	0445_QC107_240404	HDPE (no PTFE)	20 mL	00352312012623	Grey	No	
053	0445_QC110_240404	HDPE (no PTFE)	20 mL	00352312012550	Grey	No	
053	0445_QC110_240404	HDPE (no PTFE)	20 mL	00352312012668	Grey	No	
054	0445_QC108_240404	HDPE (no PTFE)	20 mL	00352312012593	Grey	No	
054	0445_QC108_240404	HDPE (no PTFE)	20 mL	00352312012438	Grey	No	
055	0445_QC106_240404	HDPE (no PTFE)	20 mL	00352312012602	Grey	No	
055	0445_QC106_240404	HDPE (no PTFE)	20 mL	00352312012621	Grey	No	
056	0445_QC300_240402	HDPE (no PTFE)	20 mL	00352309086143	Grey	No	
056	0445_QC300_240402	HDPE (no PTFE)	20 mL	00352309086070	Grey	No	
057	0445_QC301_240402	HDPE (no PTFE)	20 mL	00350522020438	Grey	No	
057	0445_QC301_240402	HDPE (no PTFE)	20 mL	00350522020284	Grey	No	
058	0445_QC302_240403	HDPE (no PTFE)	20 mL	00350822009650	Grey	No	
058	0445_QC302_240403	HDPE (no PTFE)	20 mL	00350822033140	Grey	No	
059	0445_QC303_240403	HDPE (no PTFE)	20 mL	00350522020251	Grey	No	
059	0445_QC303_240403	HDPE (no PTFE)	20 mL	00350522020302	Grey	No	
060	0445_QC304_240404	HDPE (no PTFE)	20 mL	00351221001843	Grey	No	
060	0445_QC304_240404	HDPE (no PTFE)	20 mL	00351221002194	Grey	No	
061	0445_QC305_240404	HDPE (no PTFE)	20 mL	00350822024390	Grey	No	

CHAIN OF CUSTODY

COC#: 65603 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Onsite

ORDER NO: 304300114

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

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

Random Sample Temperature on Receipt: °C

Other comments:

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER: [redacted]

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

EMAIL INVOICES TO:

061	0445_QC305_240404	HDPE (no PTFE)	20 mL	00350822024439	Grey	No	
062	0445_QC306_240405	HDPE (no PTFE)	20 mL	00352309066267	Grey	No	
062	0445_QC306_240405	HDPE (no PTFE)	20 mL	00352309066194	Grey	No	
063	0445_QC307_240405	HDPE (no PTFE)	20 mL	00352309066237	Grey	No	
063	0445_QC307_240405	HDPE (no PTFE)	20 mL	00352309066285	Grey	No	
064	0445_QC500_240405	HDPE (no PTFE)	20 mL	00352309066220	Grey	No	
064	0445_QC500_240405	HDPE (no PTFE)	20 mL	00352309066321	Grey	No	
065	0445_QC501_240405	HDPE (no PTFE)	20 mL	00350822033487	Grey	No	
065	0445_QC501_240405	HDPE (no PTFE)	20 mL	00350822032970	Grey	No	
066	0445_QC502_240405	HDPE (no PTFE)	20 mL	00350822024271	Grey	No	
066	0445_QC502_240405	HDPE (no PTFE)	20 mL	00350822024458	Grey	No	
067	0445_DRUM02_01_24040	HDPE (no PTFE)	20 mL	00352312012427	Grey	No	
067	0445_DRUM02_01_24040	HDPE (no PTFE)	20 mL	00352312012698	Grey	No	

Total Bottle Count: ALS: 147, Non ALS: 0

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2405446**	Page	: 1 of 11
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Telephone	: [redacted]
Project	: VIC_0445_PFASOMP_24	Date Samples Received	: 08-Apr-2024
Site	: Onsite	Issue Date	: 15-Apr-2024
Sampler	: [redacted]	No. of samples received	: 67
Order number	: 304300114	No. of samples analysed	: 63

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	EM2405435--021	Anonymous	**Perfluorooctane sulfonic acid (PFOS)**	1763-23-1	Not Determined	—	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	EM2405446--012	0445_MW009_240404	**Perfluorobutane sulfonic acid (PFBS)**	375-73-5	Not Determined	—	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231A: Perfluoroalkyl Sulfonic Acids	EM2405446--012	0445_MW009_240404	**Perfluoropentane sulfonic acid (PFPeS)**	2706-91-4	Not Determined	—	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231A: Perfluoroalkyl Sulfonic Acids	EM2405446--012	0445_MW009_240404	**Perfluorohexane sulfonic acid (PFHxS)**	355-46-4	Not Determined	—	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231A: Perfluoroalkyl Sulfonic Acids	EM2405446--012	0445_MW009_240404	**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	EM2405446--032	0445_SW346_240402 Lab inf	**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	EM2405446--012	0445_MW009_240404	**Perfluorohexanoic acid (PFHxA)**	307-24-4	Not Determined	—	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	5	56	8.93	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 / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0445_SD346_240402, 0445_SD355_240402, 0445_QC102_240402, 0445_QC103_240402	**02-Apr-2024**	----	----	----	**10-Apr-2024**	16-Apr-2024	✓
HDPE Soil Jar (EA055) 0445_SD375_240404, 0445_SD382_240404	**04-Apr-2024**	----	----	----	**10-Apr-2024**	18-Apr-2024	✓
HDPE Soil Jar (EA055) 0445_SD323_240405	**05-Apr-2024**	----	----	----	**10-Apr-2024**	19-Apr-2024	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0445_SD346_240402, 0445_SD355_240402, 0445_QC102_240402, 0445_QC103_240402	**02-Apr-2024**	**12-Apr-2024**	29-Sep-2024	✓	**15-Apr-2024**	22-May-2024	✓
HDPE Soil Jar (EP231X) 0445_SD375_240404, 0445_SD382_240404	**04-Apr-2024**	**12-Apr-2024**	01-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓
HDPE Soil Jar (EP231X) 0445_SD323_240405	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0445_SD346_240402, 0445_SD355_240402, 0445_QC102_240402, 0445_QC103_240402	**02-Apr-2024**	**12-Apr-2024**	29-Sep-2024	✓	**15-Apr-2024**	22-May-2024	✓
HDPE Soil Jar (EP231X) 0445_SD375_240404, 0445_SD382_240404	**04-Apr-2024**	**12-Apr-2024**	01-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓
HDPE Soil Jar (EP231X) 0445_SD323_240405	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0445_SD346_240402, 0445_SD355_240402, 0445_QC102_240402, 0445_QC103_240402	**02-Apr-2024**	**12-Apr-2024**	29-Sep-2024	✓	**15-Apr-2024**	22-May-2024	✓
HDPE Soil Jar (EP231X) 0445_SD375_240404, 0445_SD382_240404	**04-Apr-2024**	**12-Apr-2024**	01-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓
HDPE Soil Jar (EP231X) 0445_SD323_240405	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0445_SD346_240402, 0445_SD355_240402, 0445_QC102_240402, 0445_QC103_240402	**02-Apr-2024**	**12-Apr-2024**	29-Sep-2024	✓	**15-Apr-2024**	22-May-2024	✓
HDPE Soil Jar (EP231X) 0445_SD375_240404, 0445_SD382_240404	**04-Apr-2024**	**12-Apr-2024**	01-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓
HDPE Soil Jar (EP231X) 0445_SD323_240405	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0445_SD346_240402, 0445_SD355_240402, 0445_QC102_240402, 0445_QC103_240402	**02-Apr-2024**	**12-Apr-2024**	29-Sep-2024	✓	**15-Apr-2024**	22-May-2024	✓
HDPE Soil Jar (EP231X) 0445_SD375_240404, 0445_SD382_240404	**04-Apr-2024**	**12-Apr-2024**	01-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓
HDPE Soil Jar (EP231X) 0445_SD323_240405	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓

Matrix: **WATER**

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

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

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0445_SW326_240402, 0445_SW338_240402, 0445_SW446_240402, 0445_SW349_240402, 0445_SW355_240403, 0445_QC100_240402, 0445_QC101_240402	**02-Apr-2024**	**11-Apr-2024**	29-Sep-2024	✓	**12-Apr-2024**	29-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_SW346_240402 - Lab internal	**02-Apr-2024**	**12-Apr-2024**	29-Sep-2024	✓	**15-Apr-2024**	29-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_SW324_240403, 0445_QC104_240403	**03-Apr-2024**	**11-Apr-2024**	30-Sep-2024	✓	**12-Apr-2024**	30-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW304_240404, 0445_MW307_240404, 0445_MW312_240404, 0445_MW342_240404, 0445_MW345_240404, 0445_MW346_240404, 0445_MW052_240404, 0445_MW404_240404, 0445_MW350_D_240404, 0445_MW350_S_240404, 0445_MW009_240404, 0445_MW016_240404, 0445_MW042_240404, 0445_MW043_240404, 0445_MW035_240404, 0445_MW034_240404, 0445_MW046_I_240404, 0445_MW046_D_240404, 0445_MW018_240404, 0445_MW020_240404, 0445_MW012_240404, 0445_MW029_240404, 0445_MW352_240404, 0445_MW353_240404, 0445_MW354_240404, 0445_MW351_240404, 0445_SW374_240404, 0445_SW375_240404, 0445_SW382_240404	**04-Apr-2024**	**11-Apr-2024**	01-Oct-2024	✓	**12-Apr-2024**	01-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0445_QC105_240404, 0445_MW056_240404, 0445_QC109_240404, 0445_QC107_240404, 0445_QC110_240404, 0445_QC108_240404, 0445_QC106_240404	**04-Apr-2024**	**12-Apr-2024**	01-Oct-2024	✓	**15-Apr-2024**	01-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW403_240404, 0445_SW387_240405	**05-Apr-2024**	**11-Apr-2024**	02-Oct-2024	✓	**12-Apr-2024**	02-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0445_QC300_240402, 0445_QC302_240403, 0445_QC304_240404, 0445_QC306_240405, 0445_QC500_240405, 0445_QC501_240405, 0445_QC502_240405, 0445_DRUM02_01_240405	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	02-Oct-2024	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0445_SW326_240402, 0445_SW338_240402, 0445_SW346_240402, 0445_SW349_240402, 0445_SW355_240403, 0445_QC100_240402, 0445_QC101_240402	**02-Apr-2024**	**11-Apr-2024**	29-Sep-2024	✓	**12-Apr-2024**	29-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_SW346_240402 - Lab internal	**02-Apr-2024**	**12-Apr-2024**	29-Sep-2024	✓	**15-Apr-2024**	29-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_SW324_240403, 0445_QC104_240403	**03-Apr-2024**	**11-Apr-2024**	30-Sep-2024	✓	**12-Apr-2024**	30-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW304_240404, 0445_MW307_240404, 0445_MW312_240404, 0445_MW342_240404, 0445_MW345_240404, 0445_MW346_240404, 0445_MW052_240404, 0445_MW404_240404, 0445_MW350_D_240404, 0445_MW350_S_240404, 0445_MW009_240404, 0445_MW016_240404, 0445_MW042_240404, 0445_MW043_240404, 0445_MW035_240404, 0445_MW034_240404, 0445_MW046_I_240404, 0445_MW046_D_240404, 0445_MW018_240404, 0445_MW020_240404, 0445_MW012_240404, 0445_MW029_240404, 0445_MW352_240404, 0445_MW353_240404, 0445_MW354_240404, 0445_MW351_240404, 0445_SW374_240404, 0445_SW375_240404, 0445_SW382_240404	**04-Apr-2024**	**11-Apr-2024**	01-Oct-2024	✓	**12-Apr-2024**	01-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0445_QC105_240404, 0445_MW056_240404, 0445_QC109_240404, 0445_QC107_240404, 0445_QC110_240404, 0445_QC108_240404, 0445_QC106_240404	**04-Apr-2024**	**12-Apr-2024**	01-Oct-2024	✓	**15-Apr-2024**	01-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW403_240404, 0445_SW387_240405	**05-Apr-2024**	**11-Apr-2024**	02-Oct-2024	✓	**12-Apr-2024**	02-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0445_QC300_240402, 0445_QC302_240403, 0445_QC304_240404, 0445_QC306_240405, 0445_QC500_240405, 0445_QC501_240405, 0445_QC502_240405, 0445_DRUM02_01_240405	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	02-Oct-2024	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0445_SW326_240402, 0445_SW338_240402, 0445_SW346_240402, 0445_SW349_240402, 0445_SW355_240403, 0445_QC100_240402, 0445_QC101_240402	**02-Apr-2024**	**11-Apr-2024**	29-Sep-2024	✓	**12-Apr-2024**	29-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_SW346_240402 - Lab internal	**02-Apr-2024**	**12-Apr-2024**	29-Sep-2024	✓	**15-Apr-2024**	29-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_SW324_240403, 0445_QC104_240403	**03-Apr-2024**	**11-Apr-2024**	30-Sep-2024	✓	**12-Apr-2024**	30-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW304_240404, 0445_MW307_240404, 0445_MW312_240404, 0445_MW342_240404, 0445_MW345_240404, 0445_MW346_240404, 0445_MW052_240404, 0445_MW404_240404, 0445_MW350_D_240404, 0445_MW350_S_240404, 0445_MW009_240404, 0445_MW016_240404, 0445_MW042_240404, 0445_MW043_240404, 0445_MW035_240404, 0445_MW034_240404, 0445_MW046_I_240404, 0445_MW046_D_240404, 0445_MW018_240404, 0445_MW020_240404, 0445_MW012_240404, 0445_MW029_240404, 0445_MW352_240404, 0445_MW353_240404, 0445_MW354_240404, 0445_MW351_240404, 0445_SW374_240404, 0445_SW375_240404, 0445_SW382_240404	**04-Apr-2024**	**11-Apr-2024**	01-Oct-2024	✓	**12-Apr-2024**	01-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0445_QC105_240404, 0445_MW056_240404, 0445_QC109_240404, 0445_QC107_240404, 0445_QC110_240404, 0445_QC108_240404, 0445_QC106_240404	**04-Apr-2024**	**12-Apr-2024**	01-Oct-2024	✓	**15-Apr-2024**	01-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW403_240404, 0445_SW387_240405	**05-Apr-2024**	**11-Apr-2024**	02-Oct-2024	✓	**12-Apr-2024**	02-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0445_QC300_240402, 0445_QC302_240403, 0445_QC304_240404, 0445_QC306_240405, 0445_QC500_240405, 0445_QC501_240405, 0445_QC502_240405, 0445_DRUM02_01_240405	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	02-Oct-2024	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
0445_SW326_240402,	0445_SW338_240402,	**02-Apr-2024**	**11-Apr-2024**	29-Sep-2024	✓	**12-Apr-2024**	29-Sep-2024	✓
0445_SW446_240402,	0445_SW349_240402,							
0445_SW355_240403,	0445_QC100_240402,							
0445_QC101_240402								
HDPE (no PTFE) (EP231X)								
0445_SW346_240402 - Lab internal		**02-Apr-2024**	**12-Apr-2024**	29-Sep-2024	✓	**15-Apr-2024**	29-Sep-2024	✓
HDPE (no PTFE) (EP231X)								
0445_SW324_240403,	0445_QC104_240403	**03-Apr-2024**	**11-Apr-2024**	30-Sep-2024	✓	**12-Apr-2024**	30-Sep-2024	✓
HDPE (no PTFE) (EP231X)								
0445_MW304_240404,	0445_MW307_240404,	**04-Apr-2024**	**11-Apr-2024**	01-Oct-2024	✓	**12-Apr-2024**	01-Oct-2024	✓
0445_MW312_240404,	0445_MW342_240404,							
0445_MW345_240404,	0445_MW346_240404,							
0445_MW052_240404,	0445_MW404_240404,							
0445_MW350_D_240404,	0445_MW350_S_240404,							
0445_MW009_240404,	0445_MW016_240404,							
0445_MW042_240404,	0445_MW043_240404,							
0445_MW035_240404,	0445_MW034_240404,							
0445_MW046_I_240404,	0445_MW046_D_240404,							
0445_MW018_240404,	0445_MW020_240404,							
0445_MW012_240404,	0445_MW029_240404,							
0445_MW352_240404,	0445_MW353_240404,							
0445_MW354_240404,	0445_MW351_240404,							
0445_SW374_240404,	0445_SW375_240404,							
0445_SW382_240404								
HDPE (no PTFE) (EP231X)								
0445_QC105_240404,	0445_MW056_240404,	**04-Apr-2024**	**12-Apr-2024**	01-Oct-2024	✓	**15-Apr-2024**	01-Oct-2024	✓
0445_QC109_240404,	0445_QC107_240404,							
0445_QC110_240404,	0445_QC108_240404,							
0445_QC106_240404								
HDPE (no PTFE) (EP231X)								
0445_MW403_240404,	0445_SW387_240405	**05-Apr-2024**	**11-Apr-2024**	02-Oct-2024	✓	**12-Apr-2024**	02-Oct-2024	✓
HDPE (no PTFE) (EP231X)								
0445_QC300_240402,	0445_QC302_240403,	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	02-Oct-2024	✓
0445_QC304_240404,	0445_QC306_240405,							
0445_QC500_240405,	0445_QC501_240405,							
0445_QC502_240405,	0445_DRUM02_01_240405							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X)								
0445_SW326_240402,	0445_SW338_240402,	**02-Apr-2024**	**11-Apr-2024**	29-Sep-2024	✓	**12-Apr-2024**	29-Sep-2024	✓
0445_SW446_240402,	0445_SW349_240402,							
0445_SW355_240403,	0445_QC100_240402,							
0445_QC101_240402								
HDPE (no PTFE) (EP231X)								
0445_SW346_240402 - Lab internal		**02-Apr-2024**	**12-Apr-2024**	29-Sep-2024	✓	**15-Apr-2024**	29-Sep-2024	✓
HDPE (no PTFE) (EP231X)								
0445_SW324_240403,	0445_QC104_240403	**03-Apr-2024**	**11-Apr-2024**	30-Sep-2024	✓	**12-Apr-2024**	30-Sep-2024	✓
HDPE (no PTFE) (EP231X)								
0445_MW304_240404,	0445_MW307_240404,	**04-Apr-2024**	**11-Apr-2024**	01-Oct-2024	✓	**12-Apr-2024**	01-Oct-2024	✓
0445_MW312_240404,	0445_MW342_240404,							
0445_MW345_240404,	0445_MW346_240404,							
0445_MW052_240404,	0445_MW404_240404,							
0445_MW350_D_240404,	0445_MW350_S_240404,							
0445_MW009_240404,	0445_MW016_240404,							
0445_MW042_240404,	0445_MW043_240404,							
0445_MW035_240404,	0445_MW034_240404,							
0445_MW046_I_240404,	0445_MW046_D_240404,							
0445_MW018_240404,	0445_MW020_240404,							
0445_MW012_240404,	0445_MW029_240404,							
0445_MW352_240404,	0445_MW353_240404,							
0445_MW354_240404,	0445_MW351_240404,							
0445_SW374_240404,	0445_SW375_240404,							
0445_SW382_240404								
HDPE (no PTFE) (EP231X)								
0445_QC105_240404,	0445_MW056_240404,	**04-Apr-2024**	**12-Apr-2024**	01-Oct-2024	✓	**15-Apr-2024**	01-Oct-2024	✓
0445_QC109_240404,	0445_QC107_240404,							
0445_QC110_240404,	0445_QC108_240404,							
0445_QC106_240404								
HDPE (no PTFE) (EP231X)								
0445_MW403_240404,	0445_SW387_240405	**05-Apr-2024**	**11-Apr-2024**	02-Oct-2024	✓	**12-Apr-2024**	02-Oct-2024	✓
HDPE (no PTFE) (EP231X)								
0445_QC300_240402,	0445_QC302_240403,	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	02-Oct-2024	✓
0445_QC304_240404,	0445_QC306_240405,							
0445_QC500_240405,	0445_QC501_240405,							
0445_QC502_240405,	0445_DRUM02_01_240405							

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	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	5	56	8.93	10.00	×	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	56	5.36	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	56	5.36	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	56	5.36	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.

Preparation Methods	Method	Matrix	Method Descriptions
QuEChoRS 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	: **EM2405446**	Page	: 1 of 20
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: ----	Telephone	: [redacted]
Project	: VIC_0445_PFASOMP_24	Date Samples Received	: 08-Apr-2024
Order number	: 304300114	Date Analysis Commenced	: 10-Apr-2024
C-O-C number	: 65603	Issue Date	: 15-Apr-2024
Sampler	: [redacted]		
Site	: Onsite		
Quote number	: SY/139/19_Bandiana		
No. of samples received	: 67		
No. of samples analysed	: 63		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
[redacted]	Non-Metals Team Leader	Melbourne Inorganics, Springvale, VIC
[redacted]	2IC Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

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

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

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **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: 5716809)									
EM2405435-020	Anonymous	EA055: Moisture Content	----	0.1	%	33.2	34.2	3.2	0% - 20%
EM2405446-042	0445_SD375_240404	EA055: Moisture Content	----	0.1	%	30.3	31.1	2.7	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5718630)									
EM2405435-020	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	0.0005	0.0006	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	0.0145	0.0157	7.8	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2405446-046	0445_QC103_240402	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	0.0012	0.0010	22.1	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: 5718630)									
EM2405435-020	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

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: 5718630) - continued									
EM2405435-020	Anonymous	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
EM2405446-046	0445_QC103_240402	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: 5718630)									
EM2405435-020	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
EM2405446-046	0445_QC103_240402	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	0.0002	0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5718630) - continued									
EM2405446-046	0445_QC103_240402	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: 5718630)									
EM2405435-020	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
EM2405446-046	0445_QC103_240402	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: 5718630)									
EM2405435-020	Anonymous	EP231X: Sum of PFAS	---	0.0002	mg/kg	0.0150	0.0163	8.3	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0150	0.0163	8.3	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	---	0.0002	mg/kg	0.0150	0.0163	8.3	0% - 20%
EM2405446-046	0445_QC103_240402	EP231X: Sum of PFAS	---	0.0002	mg/kg	0.0012	0.0010	18.2	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0012	0.0010	18.2	No Limit
		EP231X: Sum of PFAS (WA DER List)	---	0.0002	mg/kg	0.0012	0.0010	18.2	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5718141)									
EM2405446-012	0445_MW009_240404	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	8.71	8.87	1.8	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	6.84	6.64	3.1	0% - 20%
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	1.11	1.10	0.0	0% - 20%
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	1.53	1.54	1.1	0% - 20%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.62	0.60	3.6	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5718141) - continued									
EM2405446-016	0445_MW035_240404	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	7.32	6.97	4.9	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	8.22	7.79	5.3	0% - 20%
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	1.03	0.95	8.0	0% - 20%
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	1.28	1.22	4.7	0% - 20%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.57	0.58	1.9	0% - 20%
		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: 5718147)									
EM2405446 024	0445 MW352 240404	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355 46 4	0 01	µg/L	0 01	0 01	0 0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2405446-030	0445_SW338_240402	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.21	0.22	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.60	0.63	4.9	0% - 20%
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.02	0.03	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: 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: 5720846)									
EM2405446-032	0445_SW346_240402 Lab internal	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.27	0.28	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.76	0.85	11.3	0% - 20%
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.05	0.05	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.04	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: 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: 5718141)									
EM2405446 012	0445 MW009 240404	EP231X: Perfluorooctanoic acid (PFOA)	335 67 1	0 01	µg/L	0 56	0 58	3 3	0% 20%
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.50	0.50	0.0	0% - 20%
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	2.06	2.05	0.6	0% - 20%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.31	0.32	3.2	0% - 50%
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335 76 2	0 02	µg/L	0 02	0 02	0 0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5718141) - continued									
EM2405446-012	0445_MW009_240404	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	0.3	0.0	No Limit
EM2405446-016	0445_MW035_240404	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.50	0.50	0.0	0% - 20%
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.44	0.43	2.4	0% - 20%
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	1.73	1.80	3.6	0% - 20%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.29	0.28	0.0	0% - 50%
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.3	0.3	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5718147)									
EM2405446-024	0445_MW352_240404	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
EM2405446-030	0445_SW338_240402	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.04	0.04	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.04	0.04	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.13	0.13	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: 5720846)									

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: 5720846) - continued									
EM2405446-032	0445_SW346_240402 Lab internal	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.05	0.05	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.10	0.10	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5718141)									
EM2405446-012	0445_MW009_240404	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
EM2405446-016	0445_MW035_240404	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: 5718147)									

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: 5718147) - continued									
EM2405446-024	0445_MW352_240404	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
EM2405446-030	0445_SW338_240402	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: 5720846)									
EM2405446-032	0445_SW346_240402 Lab internal	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

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: 5718141)									
EM2405446-012	0445_MW009_240404	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	0.16	0.15	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
EM2405446-016	0445_MW035_240404	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	0.25	0.26	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: 5718147)									
EM2405446-024	0445_MW352_240404	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
EM2405446-030	0445_SW338_240402	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: 5720846)									
EM2405446-032	0445_SW346_240402 Lab internal	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5720846) - continued									
EM2405446-032	0445_SW346_240402 Lab internal	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: 5718141)									
EM2405446-012	0445_MW009_240404	EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	15.6	15.5	0.3	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	---	0.01	µg/L	20.6	20.5	0.2	0% - 20%
EM2405446-016	0445_MW035_240404	EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	15.5	14.8	5.1	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	---	0.01	µg/L	20.1	19.3	4.1	0% - 20%
EP231P: PFAS Sums (QC Lot: 5718147)									
EM2405446-024	0445_MW352_240404	EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	---	0.01	µg/L	0.02	0.02	0.0	No Limit
EM2405446-030	0445_SW336_240402	EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.81	0.85	4.8	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	---	0.01	µg/L	1.06	1.11	4.6	0% - 20%
EP231P: PFAS Sums (QC Lot: 5720846)									
EM2405446-032	0445_SW346_240402 Lab internal	EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	1.03	1.13	9.3	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	---	0.01	µg/L	1.34	1.44	7.2	0% - 20%

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

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

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5718630)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	98.6	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	116	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00114 mg/kg	113	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	93.2	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	102	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	87.0	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5718630)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	119	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	125	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	116	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	116	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.1	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.6	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	111	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	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	0.00312 mg/kg	108	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5718630)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	113	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	100	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	84.2	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.9	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.3	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5718630)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5718630) - 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	0.00119 mg/kg	103	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	0.00121 mg/kg	118	70.0	130
EP231P: PFAS Sums (QCLot: 5718630)								
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**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5718141)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	87.5	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	85.6	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	91.4	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	93.6	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	89.3	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	86.4	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5718147)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	85.4	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	93.9	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	87.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	98.5	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	95.1	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	94.2	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5720846)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	84.7	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	100	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	106	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	87.1	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	90.2	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	87.1	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5718141)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5718141) - continued								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	87.5	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	89.4	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	88.3	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	86.6	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	87.4	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	85.4	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	82.4	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	84.9	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	90.5	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	84.8	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	95.7	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5718147)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	95.7	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	90.1	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	91.1	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	92.5	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	90.3	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	86.9	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	85.6	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	80.8	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	92.6	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	87.6	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	97.2	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5720846)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	89.1	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	95.9	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	91.2	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	91.2	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	89.8	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	76.7	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	80.7	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	95.7	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	85.2	65.0	144

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5720846) - continued								
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	109	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5718141)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	86.8	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	104	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	97.6	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	78.0	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	93.6	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	87.1	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	78.0	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5718147)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	86.9	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	114	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	108	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	84.8	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	96.6	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	98.1	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	90.4	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5720846)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	86.9	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	94.1	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	87.9	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	74.8	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	86.9	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	79.7	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	73.6	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5718141)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5718141) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	92.1	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	109	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	92.3	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	87.7	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5718147)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	84.7	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	95.3	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	98.4	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	83.5	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5720846)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	89.0	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	90.1	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	84.0	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	89.2	70.0	130
EP231P: PFAS Sums (QCLot: 5718141)								
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: 5718147)								
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: 5720846)								
EP231X: Sum of PFAS	---	0.01	µg/L	0	---	---	---	---
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	SpikeRecovery(%)	Acceptable Limits (%)

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: 5718630)							
EM2405435-021	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	120	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	90.1	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	101	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	84.7	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	76.6	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5718630)							
EM2405435-021	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	106	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	97.9	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	96.2	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	104	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	104	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	100	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	103	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	108	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	124	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	133	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5718630)							
EM2405435-021	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	102	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	98.3	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	92.0	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	82.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	112	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	107	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	102	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5718630)							
EM2405435-021	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	94.3	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	115	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	114	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	79.6	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			

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: 5718141)							
EM2405446-012	0445_MW009_240404	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	# Not Determined	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	# Not Determined	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	# Not Determined	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	117	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	# Not Determined	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	84.2	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5718147)							
EM2405446-024	0445_MW352_240404	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	88.9	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	99.1	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	88.5	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	91.3	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	77.2	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	73.7	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5720846)							
EM2405446-032	0445_SW346_240402 Lab internal	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	82.9	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	109	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	119	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	78.6	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	# Not Determined	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	74.8	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5718141)							
EM2405446-012	0445_MW009_240404	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	90.8	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	93.1	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	92.8	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	108	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	81.7	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	79.8	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	75.2	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	86.4	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	82.0	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	95.9	71.0	132

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5718147)							
EM2405446-024	0445_MW352_240404	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	93.2	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	98.3	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	92.7	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	93.1	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	90.8	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	83.7	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	79.4	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	71.9	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	82.3	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	77.0	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	90.2	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5720846)							
EM2405446-032	0445_SW346_240402 Lab internal	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	98.0	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	96.8	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	95.2	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	93.1	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	87.1	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	88.3	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	77.8	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	81.3	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	91.6	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	74.2	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	99.9	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5718141)							
EM2405446-012	0445_MW009_240404	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	79.5	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	79.3	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	76.0	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	70.0	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	91.3	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	88.4	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	68.0	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5718147)							
EM2405446-024	0445_MW352_240404	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	82.0	67.0	137

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5718147) - continued							
EM2405446-024	0445_MW352_240404	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	85.6	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	77.0	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	74.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	97.2	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	90.4	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	75.9	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5720846)							
EM2405446-032	0445_SW346_240402 Lab internal	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	80.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	80.4	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	72.9	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	73.0	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	75.0	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	78.9	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	66.9	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5718141)							
EM2405446-012	0445_MW009_240404	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	95.8	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	114	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	76.1	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	84.4	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5718147)							
EM2405446-024	0445_MW352_240404	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	92.4	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	94.0	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	89.0	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	76.2	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5720846)							
EM2405446-032	0445_SW346_240402 Lab internal	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	87.7	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	100	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	84.3	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: 5720846) - continued							
EM2405446-032	0445_SW346_240402 Lab internal	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	88.8	70.0	130

CERTIFICATE OF ANALYSIS

Work Order	: **EM2405446**	Page	: 1 of 33
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: ----	Telephone	: [redacted]
Project	: VIC_0445_PFASOMP_24	Date Samples Received	: 08-Apr-2024 15:40
Order number	: 304300114	Date Analysis Commenced	: 10-Apr-2024
C-O-C number	: 65603	Issue Date	: 15-Apr-2024 17:35
Sampler	: [redacted]		
Site	: Onsite		
Quote number	: SY/139/19_Bandiana		
No. of samples received	: 67		
No. of samples analysed	: 63		

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]	Non-Metals Team Leader	Melbourne Inorganics, Springvale, VIC
[redacted]	2IC Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

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

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

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

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

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

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

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

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per tables in USEPA 1633 where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where LISTED. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0445_MW304_240404	0445_MW307_240404	0445_MW312_240404	0445_MW342_240404	0445_MW345_240404
			Sampling date / time	04-Apr-2024 11:25	04-Apr-2024 11:52	04-Apr-2024 11:37	04-Apr-2024 12:37	04-Apr-2024 16:38
Compound	CAS Number	LOR	Unit	EM2405446-001	EM2405446-002	EM2405446-003	EM2405446-004	EM2405446-005
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.03	22.5	0.02	0.32	0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.04	21.9	0.03	0.28	0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.32	143	0.25	2.17	0.14
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.04	9.86	0.02	0.11	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.19	29.1	0.12	3.04	0.04
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	5.2	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.03	19.4	<0.02	0.10	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.08	45.2	0.05	0.42	0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	7.48	<0.02	0.03	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.03	11.7	0.02	0.08	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.19	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0445_MW304_240404	0445_MW307_240404	0445_MW312_240404	0445_MW342_240404	0445_MW345_240404
				Sampling date / time	04-Apr-2024 11:25	04-Apr-2024 11:52	04-Apr-2024 11:37	04-Apr-2024 12:37	04-Apr-2024 16:38
Compound	CAS Number	LOR	Unit		EM2405446-001	EM2405446-002	EM2405446-003	EM2405446-004	EM2405446-005
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	0.23	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		0.10	29.8	<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		0.86	346	0.51	6.55	0.22
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		0.51	172	0.37	5.21	0.18
Sum of PFAS (WA DER List)	---	0.01	µg/L		0.78	313	0.46	6.16	0.20
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		99.3	107	94.1	106	93.1
13C8-PFOA	---	0.02	%		103	101	105	105	98.5

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0445_MW346_240404	0445_MW052_240404	0445_MW403_240404	0445_MW404_240404	0445_MW350_D_240404
			Sampling date / time	04-Apr-2024 16:41	04-Apr-2024 16:49	05-Apr-2024 07:12	04-Apr-2024 16:49	04-Apr-2024 08:22
Compound	CAS Number	LOR	Unit	EM2405446-006	EM2405446-007	EM2405446-008	EM2405446-009	EM2405446-010
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	2.76	6.70	13.0	0.04
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	3.13	7.40	14.7	0.03
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.02	14.1	53.2	95.9	0.26
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.40	1.87	4.97	0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.01	6.04	30.5	82.4	0.38
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	0.5	1.9	2.8	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.79	3.36	5.71	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	4.29	14.2	25.6	0.06
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.82	1.68	5.12	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.88	2.78	8.66	0.02
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.03	0.04	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0445_MW346_240404	0445_MW052_240404	0445_MW403_240404	0445_MW404_240404	0445_MW350_D_240404
				Sampling date / time	04-Apr-2024 16:41	04-Apr-2024 16:49	05-Apr-2024 07:12	04-Apr-2024 16:49	04-Apr-2024 08:22
Compound	CAS Number	LOR	Unit		EM2405446-006	EM2405446-007	EM2405446-008	EM2405446-009	EM2405446-010
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	**0.54**	**0.10**	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		**0.03**	**33.7**	**124**	**259**	**0.81**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.03**	**20.1**	**83.7**	**178**	**0.64**
Sum of PFAS (WA DER List)	---	0.01	µg/L		**0.03**	**30.2**	**115**	**239**	**0.76**
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		**93.1**	**85.7**	**99.4**	**95.4**	**108**
13C8-PFOA	---	0.02	%		**105**	**98.3**	**103**	**101**	**103**

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0445_MW350_S_240404	0445_MW009_240404	0445_MW016_240404	0445_MW042_240404	0445_MW043_240404
			Sampling date / time	04-Apr-2024 07:32	04-Apr-2024 09:55	04-Apr-2024 09:01	04-Apr-2024 09:37	04-Apr-2024 09:30
Compound	CAS Number	LOR	Unit	EM2405446-011	EM2405446-012	EM2405446-013	EM2405446-014	EM2405446-015
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	3.30	1.11	0.42	0.83	0.66
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	5.30	1.53	0.51	1.03	0.84
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	73.2	8.71	3.27	6.23	5.07
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	2.98	0.62	0.24	0.49	0.42
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	40.7	6.84	4.43	7.36	6.44
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	1.3	0.3	<0.1	0.2	0.2
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	3.25	0.50	0.17	0.38	0.32
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	11.5	2.06	0.75	1.52	1.19
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	1.72	0.31	0.15	0.24	0.20
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	4.86	0.56	0.29	0.43	0.36
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	0.05	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0445_MW350_S_240404	0445_MW009_240404	0445_MW016_240404	0445_MW042_240404	0445_MW043_240404
				Sampling date / time	04-Apr-2024 07:32	04-Apr-2024 09:55	04-Apr-2024 09:01	04-Apr-2024 09:37	04-Apr-2024 09:30
Compound	CAS Number	LOR	Unit		EM2405446-011	EM2405446-012	EM2405446-013	EM2405446-014	EM2405446-015
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		**2.48**	**0.16**	<0.05	**0.20**	**0.18**
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		**151**	**22.7**	**10.2**	**18.9**	**15.9**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**114**	**15.6**	**7.70**	**13.6**	**11.5**
Sum of PFAS (WA DER List)	---	0.01	µg/L		**142**	**20.6**	**9.48**	**17.4**	**14.6**
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		**103**	**89.0**	**94.3**	**88.4**	**96.0**
13C8-PFOA	---	0.02	%		**101**	**99.5**	**105**	**102**	**100**

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0445_MW035_240404	0445_MW034_240404	0445_MW046_I_240404	0445_MW046_D_240404	0445_MW018_240404
			Sampling date / time	04-Apr-2024 09:19	04-Apr-2024 16:46	04-Apr-2024 16:45	04-Apr-2024 16:46	04-Apr-2024 16:43
Compound	CAS Number	LOR	Unit	EM2405446-016	EM2405446-017	EM2405446-018	EM2405446-019	EM2405446-020
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	1.03	0.05	0.13	0.15	0.07
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	1.28	0.05	0.18	0.19	0.08
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	7.32	0.54	1.78	1.83	0.52
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.57	0.04	0.11	0.11	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	8.22	1.04	2.30	2.35	0.46
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.3	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.44	0.02	0.06	0.06	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	1.73	0.08	0.26	0.28	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.29	<0.02	0.03	0.03	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.50	0.03	0.08	0.08	0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0445_MW035_240404	0445_MW034_240404	0445_MW046_I_240404	0445_MW046_D_240404	0445_MW018_240404
				Sampling date / time	04-Apr-2024 09:19	04-Apr-2024 16:46	04-Apr-2024 16:45	04-Apr-2024 16:46	04-Apr-2024 16:43
Compound	CAS Number	LOR	Unit		EM2405446-016	EM2405446-017	EM2405446-018	EM2405446-019	EM2405446-020
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		**0.25**	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		**21.9**	**1.85**	**4.93**	**5.07**	**1.14**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**15.5**	**1.58**	**4.08**	**4.18**	**0.98**
Sum of PFAS (WA DER List)	---	0.01	µg/L		**20.1**	**1.76**	**4.64**	**4.78**	**1.06**
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		**84.6**	**93.4**	**85.5**	**83.7**	**97.9**
13C8-PFOA	---	0.02	%		**101**	**103**	**101**	**102**	**98.0**

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0445_MW020_240404	0445_MW012_240404	0445_MW029_240404	0445_MW352_240404	0445_MW353_240404
			Sampling date / time	04-Apr-2024 16:37	04-Apr-2024 10:19	04-Apr-2024 10:06	04-Apr-2024 08:31	04-Apr-2024 10:31
Compound	CAS Number	LOR	Unit	EM2405446-021	EM2405446-022	EM2405446-023	EM2405446-024	EM2405446-025
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	**0.08**	<0.02	**0.06**	<0.02	**1.61**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	**0.10**	<0.02	**0.07**	<0.02	**1.10**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	**1.36**	**0.24**	**0.45**	<0.01	**4.64**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	**0.06**	<0.02	<0.02	<0.02	**0.10**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	**1.31**	**0.09**	**0.24**	**0.02**	**0.29**
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	**0.3**
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	**0.03**	<0.02	**0.05**	<0.02	**0.47**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	**0.17**	0.02	**0.12**	0.02	**1.85**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	**0.02**	<0.02	**0.04**	<0.02	**0.26**
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	**0.05**	<0.01	**0.02**	<0.01	**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								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0445_MW020_240404	0445_MW012_240404	0445_MW029_240404	0445_MW352_240404	0445_MW353_240404
				Sampling date / time	04-Apr-2024 16:37	04-Apr-2024 10:19	04-Apr-2024 10:06	04-Apr-2024 08:31	04-Apr-2024 10:31
Compound	CAS Number	LOR	Unit		EM2405446-021	EM2405446-022	EM2405446-023	EM2405446-024	EM2405446-025
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		**3.18**	**0.32**	**1.05**	**0.02**	**10.8**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**2.67**	**0.32**	**0.69**	**0.02**	**4.93**
Sum of PFAS (WA DER List)	---	0.01	µg/L		**3.02**	**0.32**	**0.98**	**0.02**	**9.65**
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		**96.5**	**83.9**	**82.0**	**66.4**	**102**
13C8-PFOA	---	0.02	%		**99.4**	**99.1**	**99.1**	**80.6**	**93.7**

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0445_MW354_240404	0445_MW351_240404	0445_QC105_240404	0445_MW056_240404	0445_QC109_240404
			Sampling date / time	04-Apr-2024 16:50	04-Apr-2024 16:40	04-Apr-2024 08:23	04-Apr-2024 12:17	04-Apr-2024 12:17
Compound	CAS Number	LOR	Unit	EM2405446-026	EM2405446-027	EM2405446-049	EM2405446-050	EM2405446-051
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	**0.06**	**0.13**	**0.14**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	**0.03**	**0.16**	**0.16**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	**0.02**	**0.04**	**0.27**	**0.70**	**0.72**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.02	0.02	0.02	**0.04**	**0.03**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	**0.03**	**0.06**	**0.36**	**0.53**	**0.53**
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	**0.03**	**0.03**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	**0.05**	**0.14**	**0.14**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	**0.06**	**0.06**
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	**0.02**	**0.10**	**0.10**
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0445_MW354_240404	0445_MW351_240404	0445_QC105_240404	0445_MW056_240404	0445_QC109_240404
				Sampling date / time	04-Apr-2024 16:50	04-Apr-2024 16:40	04-Apr-2024 08:23	04-Apr-2024 12:17	04-Apr-2024 12:17
Compound	CAS Number	LOR	Unit		EM2405446-026	EM2405446-027	EM2405446-049	EM2405446-050	EM2405446-051
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		**0.05**	**0.10**	**0.79**	**1.89**	**1.91**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.05**	**0.10**	**0.63**	**1.23**	**1.25**
Sum of PFAS (WA DER List)	---	0.01	µg/L		**0.05**	**0.10**	**0.76**	**1.69**	**1.72**
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		**91.4**	**71.9**	**102**	**104**	**99.0**
13C8-PFOA	---	0.02	%		**97.6**	**97.1**	**107**	**109**	**105**

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0445_QC107_240404	0445_QC108_240404	----	----	----
			Sampling date / time	04-Apr-2024 16:40	04-Apr-2024 16:45	----	----	----
Compound	CAS Number	LOR	Unit	EM2405446-052	EM2405446-054	--------	--------	--------
				Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	**0.12**	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.02	**0.19**	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	**0.03**	**1.95**	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	**0.07**	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	**0.05**	**1.97**	----	----	----
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	**0.06**	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	**0.27**	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	**0.03**	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	**0.07**	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0445_QC107_240404	0445_QC108_240404	----	----	----
				Sampling date / time	04-Apr-2024 16:40	04-Apr-2024 16:45	---	---	---
Compound	CAS Number	LOR	Unit		EM2405446-052	EM2405446-054	--------	--------	--------
					Result	Result	---	---	---
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		**0.08**	**4.73**	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.08**	**3.92**	----	----	----
Sum of PFAS (WA DER List)	---	0.01	µg/L		**0.08**	**4.47**	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		**89.9**	**82.5**	----	----	----
13C8-PFOA	---	0.02	%		**104**	**96.2**	----	----	----

Analytical Results

Sub-Matrix: RINSATE (Matrix: WATER)			Sample ID	0445_QC300_240402	0445_QC302_240403	0445_QC304_240404	0445_QC306_240405	----
			Sampling date / time	05-Apr-2024 15:34	05-Apr-2024 15:36	05-Apr-2024 15:38	05-Apr-2024 15:39	----
Compound	CAS Number	LOR	Unit	EM2405446-056	EM2405446-058	EM2405446-060	EM2405446-062	--------
				Result	Result	Result	Result	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----

Analytical Results

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0445_QC300_240402	0445_QC302_240403	0445_QC304_240404	0445_QC306_240405	----
				Sampling date / time	05-Apr-2024 15:34	05-Apr-2024 15:36	05-Apr-2024 15:38	05-Apr-2024 15:39	----
Compound	CAS Number	LOR	Unit		EM2405446-056	EM2405446-058	EM2405446-060	EM2405446-062	--------
					Result	Result	Result	Result	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	----
Sum of PFAS (WA DER List)	---	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		105	96.6	106	100	----
13C8-PFOA	---	0.02	%		104	106	105	101	----

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)			Sample ID	0445_SD323_240405	0445_SD346_240402	0445_SD355_240402	0445_SD375_240404	0445_SD382_240404
			Sampling date / time	05-Apr-2024 16:01	02-Apr-2024 15:12	02-Apr-2024 17:37	04-Apr-2024 16:49	04-Apr-2024 08:49
Compound	CAS Number	LOR	Unit	EM2405446-039	EM2405446-040	EM2405446-041	EM2405446-042	EM2405446-043
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	---	0.1	%	**16.1**	**21.7**	**23.2**	**30.3**	**21.6**
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	**0.0014**	<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	**0.0203**	**0.0037**	**0.0010**	**0.0035**	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	**0.0004**	<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	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0445_SD323_240405	0445_SD346_240402	0445_SD355_240402	0445_SD375_240404	0445_SD382_240404
				Sampling date / time	05-Apr-2024 16:01	02-Apr-2024 15:12	02-Apr-2024 17:37	04-Apr-2024 16:49	04-Apr-2024 08:49
Compound	CAS Number	LOR	Unit		EM2405446-039	EM2405446-040	EM2405446-041	EM2405446-042	EM2405446-043
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231P: PFAS Sums									
Sum of PFAS	---	0.0002	mg/kg		**0.0235**	**0.0037**	**0.0010**	**0.0035**	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0217**	**0.0037**	**0.0010**	**0.0035**	<0.0002
Sum of PFAS (WA DER List)	---	0.0002	mg/kg		**0.0222**	**0.0037**	**0.0010**	**0.0035**	<0.0002
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.0002	%		**94.6**	**85.5**	**99.1**	**113**	**93.9**
13C8-PFOA	---	0.0002	%		**99.5**	**103**	**104**	**93.3**	**96.0**

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)			Sample ID	0445_QC102_240402	0445_QC103_240402	----	----	----
			Sampling date / time	02-Apr-2024 15:13	02-Apr-2024 17:38	----	----	----
Compound	CAS Number	LOR	Unit	EM2405446-044	EM2405446-046	--------	--------	--------
				Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	**20.6**	**22.5**	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	**0.0056**	**0.0012**	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	----	----	----

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0445_QC102_240402	0445_QC103_240402	----	----	----
				Sampling date / time	02-Apr-2024 15:13	02-Apr-2024 17:38	----	----	----
Compound	CAS Number	LOR	Unit		EM2405446-044	EM2405446-046	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	---	0.0002	mg/kg		**0.0056**	**0.0012**	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0056**	**0.0012**	----	----	----
Sum of PFAS (WA DER List)	---	0.0002	mg/kg		**0.0056**	**0.0012**	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.0002	%		**100**	**96.3**	----	----	----
13C8-PFOA	---	0.0002	%		**99.4**	**101**	----	----	----

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0445_SW324_240403	0445_SW326_240402	0445_SW338_240402	0445_SW448_240402	0445_SW346_240402 Lab Internal
				Sampling date / time	03-Apr-2024 15:21	02-Apr-2024 17:38	02-Apr-2024 17:40	02-Apr-2024 17:35	02-Apr-2024 15:14
Compound	CAS Number	LOR	Unit		EM2405446-028	EM2405446-029	EM2405446-030	EM2405446-031	EM2405446-032
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		0.06	0.05	0.02	0.44	0.05
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		0.04	<0.02	0.03	0.19	0.04
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		0.66	0.19	0.21	1.81	0.27
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	<0.02	0.06	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		1.21	0.26	0.60	2.56	0.76
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	0.2	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		0.13	0.06	0.04	0.72	0.08
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		0.14	0.05	0.13	0.63	0.10
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		0.07	<0.02	0.02	0.05	0.03
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		0.06	0.01	0.04	0.10	0.05
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0445_SW324_240403	0445_SW326_240402	0445_SW338_240402	0445_SW448_240402	0445_SW346_240402 Lab Internal
				Sampling date / time	03-Apr-2024 15:21	02-Apr-2024 17:38	02-Apr-2024 17:40	02-Apr-2024 17:35	02-Apr-2024 15:14
Compound	CAS Number	LOR	Unit		EM2405446-028	EM2405446-029	EM2405446-030	EM2405446-031	EM2405446-032
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		2.37	0.62	1.09	6.76	1.38
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		1.87	0.45	0.81	4.37	1.03
Sum of PFAS (WA DER List)	---	0.01	µg/L		2.33	0.62	1.06	6.51	1.34
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		91.8	91.2	95.1	93.3	96.2
13C8-PFOA	---	0.02	%		98.8	95.6	101	98.7	101

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	0445_SW349_240402	0445_SW355_240403	0445_SW374_240404	0445_SW375_240404	0445_SW382_240404
			Sampling date / time	02-Apr-2024 17:40	02-Apr-2024 17:34	04-Apr-2024 16:44	04-Apr-2024 16:36	04-Apr-2024 16:41
Compound	CAS Number	LOR	Unit	EM2405446-033	EM2405446-034	EM2405446-035	EM2405446-036	EM2405446-037
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	**0.05**	<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	**0.27**	**0.06**	**0.03**	**0.02**	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	**0.83**	**0.22**	**0.06**	**0.05**	0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	0.02	0.02	0.02	0.02	0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	**0.09**	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	**0.10**	**0.02**	0.02	0.02	**0.02**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	**0.04**	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	**0.05**	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0445_SW349_240402	0445_SW355_240403	0445_SW374_240404	0445_SW375_240404	0445_SW382_240404
				Sampling date / time	02-Apr-2024 17:40	02-Apr-2024 17:34	04-Apr-2024 16:44	04-Apr-2024 16:36	04-Apr-2024 16:41
Compound	CAS Number	LOR	Unit		EM2405446-033	EM2405446-034	EM2405446-035	EM2405446-036	EM2405446-037
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	<0.05	<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		**1.46**	**0.30**	**0.09**	**0.07**	**0.02**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**1.10**	**0.28**	**0.09**	**0.07**	<0.01
Sum of PFAS (WA DER List)	---	0.01	µg/L		**1.42**	**0.30**	**0.09**	**0.07**	**0.02**
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		**102**	**103**	**95.6**	**102**	**91.3**
13C8-PFOA	---	0.02	%		**104**	**99.8**	**102**	**98.9**	**97.6**

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0445_SW387_240405	0445_QC100_240402	0445_QC101_240402	0445_QC104_240403	0445_QC110_240404
				Sampling date / time	05-Apr-2024 11:37	02-Apr-2024 17:37	02-Apr-2024 17:39	03-Apr-2024 15:22	04-Apr-2024 16:43
Compound	CAS Number	LOR	Unit		EM2405446-038	EM2405446-045	EM2405446-047	EM2405446-048	EM2405446-053
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		0.02	0.05	0.05	0.06	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		0.02	<0.02	0.03	0.05	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		0.21	0.18	0.27	0.65	0.03
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		0.12	0.27	0.82	1.18	0.05
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		0.02	0.02	0.02	0.02	0.02
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	0.05	0.09	0.12	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		0.03	0.06	0.10	0.15	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	<0.02	0.04	0.06	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	0.01	0.05	0.07	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0445_SW387_240405	0445_QC100_240402	0445_QC101_240402	0445_QC104_240403	0445_QC110_240404
				Sampling date / time	05-Apr-2024 11:37	02-Apr-2024 17:37	02-Apr-2024 17:39	03-Apr-2024 15:22	04-Apr-2024 16:43
Compound	CAS Number	LOR	Unit		EM2405446-038	EM2405446-045	EM2405446-047	EM2405446-048	EM2405446-053
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		**0.40**	**0.62**	**1.44**	**2.34**	**0.08**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.33**	**0.45**	**1.09**	**1.83**	**0.08**
Sum of PFAS (WA DER List)	---	0.01	µg/L		**0.38**	**0.62**	**1.41**	**2.29**	**0.08**
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		**94.6**	**90.0**	**94.8**	**87.1**	**95.6**
13C8-PFOA	---	0.02	%		**102**	**100**	**104**	**94.5**	**104**

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	0445_QC106_240404	----	----	----	----
			Sampling date / time	04-Apr-2024 16:51	---	---	---	---
Compound	CAS Number	LOR	Unit	EM2405446-055	--------	--------	--------	--------
				Result	---	---	---	---
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.02	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.01	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.02	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0445_QC106_240404	----	----	----	----
			Sampling date / time		04-Apr-2024 16:51	---	---	---	---
Compound	CAS Number	LOR	Unit		EM2405446-055	--------	--------	--------	--------
					Result	---	---	---	---
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		0.02	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		0.02	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	----	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		0.02	----	----	----	----
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		0.02	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		107	----	----	----	----
13C8-PFOA	---	0.02	%		105	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	0445_QC500_240405	0445_QC501_240405	0445_QC502_240405	0445_DRUM02_01_240405	----
			Sampling date / time	05-Apr-2024 16:26	05-Apr-2024 16:27	05-Apr-2024 16:28	05-Apr-2024 16:42	----
Compound	CAS Number	LOR	Unit	EM2405446-064	EM2405446-065	EM2405446-066	EM2405446-067	--------
				Result	Result	Result	Result	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	**2.71**	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	**2.81**	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	**39.4**	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	**6.06**	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	**120**	----
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	**0.8**	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	**1.80**	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	**5.71**	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	**1.12**	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	**3.16**	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	**0.29**	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0445_QC500_240405	0445_QC501_240405	0445_QC502_240405	0445_DRUM02_01_240405	----
				Sampling date / time	05-Apr-2024 16:26	05-Apr-2024 16:27	05-Apr-2024 16:28	05-Apr-2024 16:42	---
Compound	CAS Number	LOR	Unit		EM2405446-064	EM2405446-065	EM2405446-066	EM2405446-067	--------
					Result	Result	Result	Result	---
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	<0.05	**0.85**	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	**0.12**	----
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	**185**	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	<0.01	<0.01	**159**	----
Sum of PFAS (WA DER List)	---	0.01	µg/L		<0.01	<0.01	<0.01	**176**	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		**91.9**	**107**	**105**	**111**	----
13C8-PFOA	---	0.02	%		**96.7**	**105**	**107**	**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

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	---	68	136
13C8-PFOA	---	69	133

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

ALSCompass
SAMPLING *Intelligence*

ALS

Environmental Division
Melbourne
Work Order Reference
EM2405437

Telephone : +61-3-8549 9600

Custody Document for Submissions via ALS Compass App

Project: VIC_0445_PFASOMP_24 Client: STANTEC Project Manager:

Phone: ( )

ALS Compass COC Reference: 65606 # Samples: Sampler:

Phone: ( )

Turnaround Requirements: Standard Urgent

Special Instructions:	ALS Use Only		
	Custody seal intact?	YES (NO)	N/A
	(Free ice) / frozen ice bricks upon receipt?	(YES) NO	N/A
	Random sample temperature on receipt?	7.1 °C	

Custody:

Relinquished by:	Received by:	Relinquished by:	Received by:
			[redacted]
Date / Time:	Date / Time:	Date / Time:	Date / Time: 08/04/24 – 15:40

CHAIN OF CUSTODY

(ALS) COC#: 65606 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: PO - O

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0445_SD396_240405		05/04/2024 03:43 PM	SOIL	ALS: 1 Non ALS: 0	No		X		
002	0445_SW397_240405		05/04/2024 03:40 PM	WATER	ALS: 6 Non ALS: 0	No	X			Lab internal
003	0445_SD397_240405		05/04/2024 03:43 PM	SOIL	ALS: 1 Non ALS: 0	No		X		
004	0445_SW400_240405		05/04/2024 03:39 PM	WATER	ALS: 2 Non ALS: 0	No	X			
005	0445_SD400_240405		05/04/2024 03:42 PM	SOIL	ALS: 3 Non ALS: 0	No		X		Lab internal
006	0445_SW487_240405		05/04/2024 03:40 PM	WATER	ALS: 2 Non ALS: 0	No	X			

CHAIN OF CUSTODY

(ALS) COC#: 65606 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: PO - O

ORDER NO: 304300114

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

EMAIL INVOICES TO:

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	0445_SD396_240405	HDPE Soil Jar	200 mL	00621122021409	Grey	No	
002	0445_SW397_240405	HDPE (no PTFE)	20 mL	00352312012567	Grey	No	
002	0445_SW397_240405	HDPE (no PTFE)	20 mL	00352312012477	Grey	No	
002	0445_SW397_240405	HDPE (no PTFE)	20 mL	00352312012628	Grey	No	
002	0445_SW397_240405	HDPE (no PTFE)	20 mL	00352312012580	Grey	No	
002	0445_SW397_240405	HDPE (no PTFE)	20 mL	00352312012513	Grey	No	
002	0445_SW397_240405	HDPE (no PTFE)	20 mL	00352312012561	Grey	No	
003	0445_SD397_240405	HDPE Soil Jar	200 mL	00621122021346	Grey	No	
004	0445_SW400_240405	HDPE (no PTFE)	20 mL	00352312012450	Grey	No	
004	0445_SW400_240405	HDPE (no PTFE)	20 mL	00352312012433	Grey	No	
005	0445_SD400_240405	HDPE Soil Jar	200 mL	00621018004023	Grey	No	
005	0445_SD400_240405	HDPE Soil Jar	200 mL	00621018004113	Grey	No	
005	0445_SD400_240405	HDPE Soil Jar	200 mL	00621122021390	Grey	No	
006	0445_SW487_240405	HDPE (no PTFE)	20 mL	00352312012440	Grey	No	
006	0445_SW487_240405	HDPE (no PTFE)	20 mL	00352312012471	Grey	No	

Total Bottle Count: ALS: 15, Non ALS: 0

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2405437**	Page	: 1 of 5
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Telephone	: [redacted]
Project	: VIC_0445_PFASOMP_24	Date Samples Received	: 08-Apr-2024
Site	: PO - O	Issue Date	: 15-Apr-2024
Sampler	: [redacted]	No. of samples received	: 6
Order number	: 304300114	No. of samples analysed	: 6

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	EM2405437--002	0445_SW397_240405	**Perfluorobutane sulfonic acid (PFBS)**	375-73-5	Not Determined	---	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231A: Perfluoroalkyl Sulfonic Acids	EM2405437--002	0445_SW397_240405	**Perfluoropentane sulfonic acid (PFPeS)**	2706-91-4	Not Determined	---	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231A: Perfluoroalkyl Sulfonic Acids	EM2405437--002	0445_SW397_240405	**Perfluorohexane sulfonic acid (PFHxS)**	355-46-4	Not Determined	---	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231A: Perfluoroalkyl Sulfonic Acids	EM2405437--002	0445_SW397_240405	**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	EM2405437--002	0445_SW397_240405	**Perfluorohexanoic acid (PFHxA)**	307-24-4	Not Determined	---	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days, others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach , ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)								
HDPE Soil Jar (EA055)								
0445_SD396_240405, 0445_SD400_240405	0445_SD397_240405,	**05-Apr-2024**	---	---	---	**10-Apr-2024**	19-Apr-2024	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X)								
0445_SD396_240405, 0445_SD400_240405	0445_SD397_240405,	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X)								
0445_SD396_240405, 0445_SD400_240405	0445_SD397_240405,	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231C: Perfluoroalkyl Sulfonamides								
HDPE Soil Jar (EP231X) 0445_SD396_240405, 0445_SD400_240405	0445_SD397_240405,	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X) 0445_SD396_240405, 0445_SD400_240405	0445_SD397_240405,	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X) 0445_SD396_240405, 0445_SD400_240405	0445_SD397_240405,	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	22-May-2024	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0445_SW397_240405, 0445_SW487_240405	0445_SW400_240405,	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	02-Oct-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) 0445_SW397_240405, 0445_SW487_240405	0445_SW400_240405,	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	02-Oct-2024	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X) 0445_SW397_240405, 0445_SW487_240405	0445_SW400_240405,	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	02-Oct-2024	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0445_SW397_240405, 0445_SW487_240405	0445_SW400_240405,	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	02-Oct-2024	✓
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X) 0445_SW397_240405, 0445_SW487_240405	0445_SW400_240405,	**05-Apr-2024**	**12-Apr-2024**	02-Oct-2024	✓	**15-Apr-2024**	02-Oct-2024	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.

Preparation Methods	Method	Matrix	Method Descriptions
QuEChoRS 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	: **EM240546S**	Page	: 1 of 1.
y l@i r	: **DTANTEC AUDTRALIA PTY LTD**	2aLobarott	: ni E@oi v ei ral m@S@i DelLoMbi e
y oi raur	: [redacted]	y oi raur	: [redacted]
ckkbess	: [redacted]	ckkbess	: [redacted]
Telep- oi e	: ----	Telep- oi e	: [redacted]
Pbojeur	: dSy_. 449_PFcSI DP_V4	mare Sav ples Reue@ek	: . 8-cpb-V. V4
I tkebi Mv Leb	: 3. 43. . 114	mare ci alt s@ y ov v ei uek	: 1. -cpb-V. V4
y -l -y i Mv Leb	: 696. 6	SssMe mare	: 19-cpb-V. V4
Sav pleb	: [redacted]		
S@e	: PI -I		
QMbre i Mv Leb	: SY/137/17_Bai k@ai a		
Oo0of sav ples beue@ek	: 6		
Oo0of sav ples ai alt sek	: 6		

T-@ bepobr sMpebsekes ai t pbe E@Ms bepobr(s) w@- r-@ befebei ue0 ResMrs applt ro r-e sav ple(s) as sMLv @rek, Mless r-e sav pl@g was uoi kMurek Lt c2S0 T-@ kouMv ei r s-all i or Le bepbokMuek, exuepr @ fMl0

T-@ QMalC@t y oi rbol Repobr uoi ra@s r-e follow@g @fobv ar@i :

- 2aLobarott mMpl@are (mUP) Repobr; Relar@e Pebuei rage m@febei ue (RPm) ai k cuueprai ue 20@s
- Der-ok Blai k (DB) ai k 2aLobarott y oi rbol Sp@e (2y S) Repobr; Reuo Eebtt ai k cuueprai ue 20@s
- Darb@ Sp@e (DS) Repobr; Reuo Eebtt ai k cuueprai ue 20@s

Signatories

T-@ kouMv ei r-as Leei eleurboi @allt s@i ek Lt r-e aM-ob2ek s@i arob@s Lelow0n leurboi @ s@i @g @ uabb@k oM@ uov pl@i ue w@- pbouekMbes speu@ek @ V1 y FR Pabr 110

Signatories	*Position*	*Accreditation Category*
[redacted]	Ooi -Derals Teav 2eakeb	DelLoMbi e Sbobgai @s, Spb@gEale, dSy
[redacted]	VSy I bgai @ y -ev @r	DelLoMbi e Sbobgai @s, Spb@gEale, dSy
[redacted]	VSy I bgai @ y -ev @r	DelLoMbi e I bgai @s, Spb@gEale, dSy

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: 5717113)									
EM2405437-001	0445_SD396_240405	EA055: Moisture Content	---	0.1	%	34.9	35.0	0.3	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5718650)									
EB2411404-006	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<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
EM2405437-001	0445_SD396_240405	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	0.0005	0.0005	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0006	0.0006	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0104	0.0102	2.2	0% - 20%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0007	0.0007	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0304	0.0261	15.0	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5718650)									
EB2411404-006	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	0.0002	0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	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: 5718650) - continued									
EB2411404-006	Anonymous	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
EM2405437-001	0445_SD396_240405	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	0.0006	0.0004	35.1	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (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: 5718650)									
EB2411404-006	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		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
EM2405437-001	0445_SD396_240405	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506 32 8	0 0005	mg/kg	0 0005	0 0005	0 0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5718650) - continued									
EM2405437-001	0445_SD396_240405	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: 5718650)									
EB2411404-006	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2405437-001	0445_SD396_240405	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: 5718650)									
EB2411404-006	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
EM2405437-001	0445_SD396_240405	EP231X: Sum of PFAS	---	0.0002	mg/kg	0.0438	0.0388	12.1	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0408	0.0363	11.7	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	---	0.0002	mg/kg	0.0422	0.0375	11.8	0% - 20%

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5720889)									
EM2405437-002	0445_SW397_240405	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	4.61	4.63	0.4	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	4.31	5.20	18.7	0% - 20%
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.69	0.68	0.0	0% - 20%
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.72	0.79	9.2	0% - 20%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.32	0.37	12.8	0% - 50%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5720889)									
EM2405437-002	0445_SW397_240405	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.36	0.36	0.0	0% - 20%
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.26	0.27	3.9	0% - 50%
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	1.08	1.12	3.2	0% - 20%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.20	0.21	7.5	0% - 50%
		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	0.2	0.2	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5720889)									
EM2405437-002	0445_SW397_240405	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: 5720889)									
EM2405437-002	0445_SW397_240405	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: 5720889)									
EM2405437-002	0445_SW397_240405	EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	8.92	9.83	9.7	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	---	0.01	µg/L	11.7	12.7	7.9	0% - 20%

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

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

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5718650)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	90.4	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	81.4	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00114 mg/kg	80.7	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	93.7	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	93.9	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	87.8	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5718650)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	87.8	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.8	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	80.7	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.3	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.7	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	84.4	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	74.0	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	81.6	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	75.0	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	86.7	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5718650)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.4	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	106	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	87.4	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	80.8	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	89.3	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.2	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	77.9	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5718650)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5718650) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	95.4	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00119 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	98.8	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00121 mg/kg	81.2	70.0	130
EP231P: PFAS Sums (QCLot: 5718650)								
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**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5720889)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	97.5	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	91.9	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	91.1	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	97.9	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	95.3	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	92.2	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5720889)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	86.0	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	89.1	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	88.0	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	88.6	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	90.5	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	90.6	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	90.8	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	77.9	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	92.6	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	81.3	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	97.6	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5720889)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	90.8	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	111	68.0	141

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5720889) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	89.3	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	92.0	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	94.1	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	99.9	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	85.7	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5720889)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	99.3	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	99.1	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	104	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	84.4	70.0	130
EP231P: PFAS Sums (QCLot: 5720889)								
EP231X: Sum of PFAS	---	0.01	µg/L	<0.01	---	---	---	---
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	---	---	---	---
EP231X: Sum of PFAS (WA DER List)	---	0.01	µg/L	<0.01	---	---	---	---

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5718650)							
EB2411404-018	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	108	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	116	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	121	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	117	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	104	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	103	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5718650)							
EB2411404-018	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	98.2	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	108	69.0	132

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5718650) - continued							
EB2411404-018	Anonymous	EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	99.7	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	107	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	100	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	103	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	86.0	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	104	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	89.8	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	105	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5718650)							
EB2411404-018	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	104	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	123	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	92.2	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	85.2	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	107	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	116	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	102	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5718650)							
EB2411404-018	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	117	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	102	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	106	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	84.8	70.0	130

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5720889)							
EM2405437-002	0445_SW397_240405	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	# Not Determined	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	# Not Determined	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	# Not Determined	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	129	69.0	134

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: 5720889) - continued							
EM2405437-002	0445_SW397_240405	EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	# Not Determined	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	114	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5720889)							
EM2405437-002	0445_SW397_240405	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	117	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	119	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	72.4	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	108	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	117	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	108	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	105	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	109	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	98.1	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	113	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5720889)							
EM2405437-002	0445_SW397_240405	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	107	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	120	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	106	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	105	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	110	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	119	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	107	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5720889)							
EM2405437-002	0445_SW397_240405	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	128	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	102	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	128	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	96.6	70.0	130

CERTIFICATE OF ANALYSIS

Work Order	: **EM2405437**	Page	: 1 of 7
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: ----	Telephone	: [redacted]
Project	: VIC_0445_PFASOMP_24	Date Samples Received	: 08-Apr-2024 15:40
Order number	: 304300114	Date Analysis Commenced	: 10-Apr-2024
C-O-C number	: 65606	Issue Date	: 15-Apr-2024 13:28
Sampler	: [redacted]		
Site	: PO - O		
Quote number	: SY/139/19_Bandiana		
No. of samples received	: 6		
No. of samples analysed	: 6		

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]	Non-Metals Team Leader	Melbourne Inorganics, Springvale, VIC
[redacted]	2IC Organic Chemist	Melbourne Inorganics, Springvale, VIC
	2IC Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

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

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

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

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

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

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

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

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- Sample #5 has been air-dried prior to analysis as moisture content was determined to be >50%.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per tables in USEPA 1633 where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where LISTED. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)			Sample ID	0445_SD396_240405	0445_SD397_240405	0445_SD400_240405	----	----
			Sampling date / time	05-Apr-2024 15:43	05-Apr-2024 15:43	05-Apr-2024 15:42	----	----
Compound	CAS Number	LOR	Unit	EM2405437-001	EM2405437-003	EM2405437-005	--------	--------
				Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	34.9	34.1	5.5	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	0.0005	0.0003	0.0002	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0006	0.0004	0.0003	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0104	0.0047	0.0040	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0007	0.0008	0.0005	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0304	0.0586	0.0170	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<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	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0006	0.0009	<0.0002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0003	0.0005	<0.0002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0445_SD396_240405	0445_SD397_240405	0445_SD400_240405	----	----
				Sampling date / time	05-Apr-2024 15:43	05-Apr-2024 15:43	05-Apr-2024 15:42	----	----
Compound	CAS Number	LOR	Unit		EM2405437-001	EM2405437-003	EM2405437-005	--------	--------
					Result	Result	Result	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
EP231P: PFAS Sums									
Sum of PFAS	---	0.0002	mg/kg		**0.0438**	**0.0662**	**0.0220**	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0408**	**0.0633**	**0.0210**	----	----
Sum of PFAS (WA DER List)	---	0.0002	mg/kg		**0.0422**	**0.0650**	**0.0212**	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.0002	%		**99.0**	**116**	**111**	----	----
13C8-PFOA	---	0.0002	%		**98.1**	**97.5**	**84.6**	----	----

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	0445_SW397_240405	0445_SW400_240405	0445_SW487_240405	----	----
			Sampling date / time	05-Apr-2024 15:40	05-Apr-2024 15:39	05-Apr-2024 15:40	----	----
Compound	CAS Number	LOR	Unit	EM2405437-002	EM2405437-004	EM2405437-006	--------	--------
				Result	Result	Result	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.69	0.13	0.64	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.72	0.13	0.67	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	4.61	0.91	4.42	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.32	0.04	0.30	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	4.31	0.59	4.68	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.2	<0.1	0.1	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.26	0.02	0.26	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	1.08	0.13	1.09	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.20	0.02	0.19	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.36	0.04	0.34	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	0.02	0.02	0.02	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	0.02	0.02	0.02	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	0.02	0.02	0.02	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	0.05	0.05	0.05	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	----	----

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0445_SW397_240405	0445_SW400_240405	0445_SW487_240405	----	----
				Sampling date / time	05-Apr-2024 15:40	05-Apr-2024 15:39	05-Apr-2024 15:40	----	----
Compound	CAS Number	LOR	Unit		EM2405437-002	EM2405437-004	EM2405437-006	--------	--------
					Result	Result	Result	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	<0.05	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	----	----
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		12.8	2.00	12.7	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		8.92	1.49	9.10	----	----
Sum of PFAS (WA DER List)	---	0.01	µg/L		11.7	1.83	11.7	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		88.8	73.0	89.4	----	----
13C8-PFOA	---	0.02	%		95.8	94.1	100	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	---	68	136
13C8-PFOA	---	69	133

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

ALSCompass
SAMPLING *Intelligence*

ALS

Environmental Division
Melbourne
Work Order Reference
EM2405436

Telephone : +61-3-8549 9600

Custody Document for Submissions via ALS Compass App

Project: VIC_0445_PFASOMP_24 Client: STANTEC Project Manager:

Phone: ( )

ALS Compass COC Reference: 65605 # Samples: Sampler:

Phone: ( )

Turnaround Requirements: Standard Urgent

Special Instructions:	ALS Use Only		
	Custody seal intact?	YES (NO)	N/A
	(Free ice) / frozen ice bricks upon receipt?	(YES) NO	N/A
	Random sample temperature on receipt?	7.1 °C	

Custody:

Relinquished by:	Received by:	Relinquished by:	Received by: [redacted]
Date / Time:	Date / Time:	Date / Time:	Date / Time: 08/04/24 – 15:40

CHAIN OF CUSTODY

COC#: 65605 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: PO - H

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	GW: PFAS Only WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0445_OTH019_240403		03/04/2024 03:20 PM	WATER	ALS: 2 Non ALS: 0	No	X		

CHAIN OF CUSTODY

(ALS) COC#: 65605 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: PO - H

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0445_OTH019_240403	HDPE (no PTFE)	20 mL	00352312012604	Grey	No	
001	0445_OTH019_240403	HDPE (no PTFE)	20 mL	00352312012535	Grey	No	

Total Bottle Count: ALS: 2, Non ALS: 0

QUALITY CONTROL REPORT

Work Order	: **EM2405436**	ePgs	: 7 1of
t ysi b	: **STANTEC AUSTRALIA PTY LTD**	2PL1aPb1ar	: ni EG1i v si bPymGCCCi MsyL1l ai s
t 1i bPub	: [redacted]	t 1i bPub	: [redacted]
ckkasDD	: [redacted]	ckkasDD	: [redacted]
Fsys4h1i s	: ----	Fsys4h1i s	: [redacted]
ea1jsub	: d$ _. 665_eRcSI Me_V6	mPts SPv 4ysDRsusGsk	: . 8-c4aV. V6
I aksai l v Lsa	: 3. 63. . 776	mPts ci PyDCCt 1v v si usk	: 7. -c4aV. V6
t -l -t i l v Lsa	: f 5f . 5	SCCI s mPts	: 75-c4aV. V6
SPv 4ysa	: [redacted]		
SGs	: el -H		
QI 1bs i l v Lsa	: SY/739/79_BPi kGPi P		
O101oDPv 4ysDasusGsk	: 7		
O101oDPv 4ysDPi PyDsk	: 7		

FhGD as41ab DI 4saDsksD Pi r 4asEG1l D as41ab(D) wGh bhGD asosasi us0 RsDl ybD P44yr bl bhs DPv 4ys(D) PD DI Lv Gsk, I iysDD bhs DPv 4yCg wPD u1i kl ubsk Lr c2S0 FhGD k1ul v si b DhPy i 1bLs as4a1kl usk, sxus4bC d yy0

FhGDQl PyGr t 1i ba1yRs41abu1i bPCCDbhs d1yy1wCg Cd1av PbGi :

- 2PL1aPb1ar ml 4yQPts (mUe) Rs41ab; RsyPbGEs esausi bPgs mQosasi us (Rem) Pi k cuus4bPi us 2V GD
- Msth1k ByPi k (MB) Pi k 2PL1aPb1ar t 1i ba1yS4Gs (2t S) Rs41ab; Rsu1Esar Pi k cuus4bPi us 2V GD
- MPtaQ S4Gs (MS) Rs41ab; Rsu1Esar Pi k cuus4bPi us 2V GD

Signatories

FhGDk1ul v si bhPDLssi sysuba1i QPyr DGi sk Lr bhs Pi bh1a2sk DGi Pb1aGDLsy1w0nysuba1i Q DGi Cg CDuPaaGsk 1l bC u1v 4yGPi us wGh 4a1uskl asDD4suGGsk C V7 t RR ePab770

Signatories	*Position*	*Accreditation Category*
[redacted]	SsiCal agPi Qt hsv Cb	MsyL1l ai s l agPi QD, S4aCgEPys, d$

General Comments

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

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

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit, Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5720889)									
EM2405437-002	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	4.61	4.63	0.4	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	4.31	5.20	18.7	0% - 20%
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.69	0.68	0.0	0% - 20%
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.72	0.79	9.2	0% - 20%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.32	0.37	12.8	0% - 50%
		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: 5720889)									
EM2405437-002	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.36	0.36	0.0	0% - 20%
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.26	0.27	3.9	0% - 50%
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	1.08	1.12	3.2	0% - 20%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.20	0.21	7.5	0% - 50%
		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	0.2	0.2	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5720889)									
EM2405437-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit

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: 5720889) - continued									
EM2405437-002	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5720889)									
EM2405437-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 5720889)									
EM2405437-002	Anonymous	EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	8.92	9.83	9.7	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	---	0.01	µg/L	11.7	12.7	7.9	0% - 20%

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

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

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5720889)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	97.5	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	91.9	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	91.1	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	97.9	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	95.3	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	92.2	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5720889)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	88.0	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	89.1	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	88.0	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	88.6	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	90.5	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	90.6	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	90.8	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	77.9	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	92.6	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	81.3	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	97.6	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5720889)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	90.8	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	111	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	89.3	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	92.0	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	94.1	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	99.9	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	85.7	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5720889)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5720889) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	99.3	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	99.1	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	104	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	84.4	70.0	130
EP231P: PFAS Sums (QCLot: 5720889)								
EP231X: Sum of PFAS	---	0.01	µg/L	<0.01	---	---	---	---
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	---	---	---	---
EP231X: Sum of PFAS (WA DER List)	---	0.01	µg/L	<0.01	---	---	---	---

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5720889)							
EM2405437-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	# Not Determined	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	# Not Determined	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	# Not Determined	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	129	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	# Not Determined	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	114	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5720889)							
EM2405437-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	117	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	119	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	72.4	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	108	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	117	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	108	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	105	69.0	133

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5720889) - continued							
EM2405437-002	Anonymous	EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	109	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	98.1	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	113	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5720889)							
EM2405437-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	107	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	120	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	106	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	105	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	110	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	119	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	107	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5720889)							
EM2405437-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	128	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	102	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	128	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	96.6	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2405436**	Page	: 1 of 5
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Telephone	: [redacted]
Project	: VIC_0445_PFASOMP_24	Date Samples Received	: 08-Apr-2024
Site	: PO - H	Issue Date	: 15-Apr-2024
Sampler	: [redacted]	NoBof samples received	: 1
Order number	: 304300114	NoBof samples analysed	: 1

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

Qrief method summaries and references are also provided to assist in traceabilityB

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the (uality Control)(C) ReportB

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	EM2405437--002	Anonymous	**Perfluorobutane sulfonic acid (PFBS)**	375-73-5	Not Determined	—	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231A: Perfluoroalkyl Sulfonic Acids	EM2405437--002	Anonymous	**Perfluoropentane sulfonic acid (PFPeS)**	2706-91-4	Not Determined	—	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231A: Perfluoroalkyl Sulfonic Acids	EM2405437--002	Anonymous	**Perfluorohexane sulfonic acid (PFHxS)**	355-46-4	Not Determined	—	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231A: Perfluoroalkyl Sulfonic Acids	EM2405437--002	Anonymous	**Perfluorooctane sulfonic acid (PFOS)**	1763-23-1	Not Determined	—	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231B: Perfluoroalkyl Carboxylic Acids	EM2405437--002	Anonymous	**Perfluorohexanoic acid (PFHxA)**	307-24-4	Not Determined	—	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days, others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0445_OTH019_240403	**03-Apr-2024**	**12-Apr-2024**	30-Sep-2024	✓	**15-Apr-2024**	30-Sep-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0445_OTH019_240403	**03-Apr-2024**	**12-Apr-2024**	30-Sep-2024	✓	**15-Apr-2024**	30-Sep-2024	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0445_OTH019_240403	**03-Apr-2024**	**12-Apr-2024**	30-Sep-2024	✓	**15-Apr-2024**	30-Sep-2024	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0445_OTH019_240403	**03-Apr-2024**	**12-Apr-2024**	30-Sep-2024	✓	**15-Apr-2024**	30-Sep-2024	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X)							
0445_OTH019_240403	**03-Apr-2024**	**12-Apr-2024**	30-Sep-2024	✓	**15-Apr-2024**	30-Sep-2024	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.

Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

CERTIFICATE OF ANALYSIS

Work Order	: **EM2405436**	Page	: 1 of 3
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Tele7- one	: ---	Tele7- one	: [redacted]
Project	: VIC_0pp3_PFASOMP_2p	Date Sam7les Received	: 08-A7r-202p 13:p0
Order number	: 60p60011p	Date Analysis Commenced	: 10-A7r-202p
C-O-C number	: 43403	Issue Date	: 13-A7r-202p 16:3p
Sam7ler	: [redacted]		
Site	: PO - H		
Quote number	: SY/169/19_Bandiana		
No. of sam7les received	: 1		
No. of sam7les analysed	: 1		

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

T- is re7ort su7ersedes any 7revious re7ort(s) wit- t- is reference. Results a77ly to t- e sam7le(s) as submitted, unless t- e sam7ling was conducted by ALS. T- is document s- all not be re7roduced, exce7t in full.

T- is Certificate of Analysis contains t- e 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

T- is document - as been electronically signed by t- e aut- orized signatories below. Electronic signing is carried out in com7liance wit- 7rocedures s7ecified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Senior Organic C- emist	Melbourne Organics, S7ringvale, VIC

General Comments

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

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

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

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

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

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

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

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per tables in USEPA 1633 where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0445_OTH019_240403	----	----	----	----
			Sampling date / time	03-Apr-2024 15:20	---	---	---	---
Compound	CAS Number	LOR	Unit	EM2405436-001	--------	--------	--------	--------
				Result	---	---	---	---
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	**0.13**	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	**0.04**	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	----	----	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0445_OTH019_240403	----	----	----	----
				Sampling date / time	03-Apr-2024 15:20	---	---	---	---
Compound	CAS Number	LOR	Unit		EM2405436-001	----------	----------	----------	----------
					Result	---	---	---	---
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	----	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		0.17	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		0.17	----	----	----	----
Sum of PFAS (WA DER List)	---	0.01	µg/L		0.17	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		84.8	----	----	----	----
13C8-PFOA	---	0.02	%		95.4	----	----	----	----

Surrogate Control Limits

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

ALSCompass
SAMPLING *Intelligence*

ALS

Environmental Division
Melbourne
Work Order Reference
EM2405435

Telephone : +61-3-8549 9600

Custody Document for Submissions via ALS Compass App

Project: VIC_0445_PFASOMP_24 Client: STANTEC

Project Manager:

Phone: ( )

ALS Compass COC Reference: 65604 # Samples:

Sampler:

Phone: ( )

Turnaround Requirements: Standard Urgent

Special Instructions:	ALS Use Only
	Custody seal intact? YES (NO) N/A
	(Free ice) / frozen ice bricks upon receipt? (YES) NO N/A
	Random sample temperature on receipt? 7.1 °C

Custody:

Relinquished by:	Received by:	Relinquished by:	Received by: [redacted]
Date / Time:	Date / Time:	Date / Time:	Date / Time: 08/04/24 – 15:40

CHAIN OF CUSTODY

ALS COC#: 65604 ALS Laboratory: EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Offsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER: [redacted]

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0445_MW360_240404		04/04/2024 02:20 PM	WATER	ALS: 2 Non ALS: 0	No	X			
002	0445_MW361_240404		04/04/2024 04:35 PM	WATER	ALS: 6 Non ALS: 0	No	X			Internal lab qc
003	0445_MW357_240404		04/04/2024 03:09 PM	WATER	ALS: 2 Non ALS: 0	No	X			
004	0445_MW356_240405		05/04/2024 12:35 PM	WATER	ALS: 2 Non ALS: 0	No	X			
005	0445_SW424_240405		05/04/2024 07:47 AM	WATER	ALS: 2 Non ALS: 0	No	X			
006	0445_SW427_240402		02/04/2024 05:35 PM	WATER	ALS: 2 Non ALS: 0	No	X			
007	0445_SW430_240403		03/04/2024 03:05 PM	WATER	ALS: 2 Non ALS: 0	No	X			

CHAIN OF CUSTODY

(ALS) COC#: 65604 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Offsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
008	0445_SW431_240403		03/04/2024 03:14 PM	WATER	ALS: 2 Non ALS: 0	No	X			
009	0445_SW432_240403		03/04/2024 02:19 PM	WATER	ALS: 2 Non ALS: 0	No	X			
010	0445_SW434_240403		03/04/2024 01:52 PM	WATER	ALS: 2 Non ALS: 0	No	X			
011	0445_SW409_240403		03/04/2024 03:19 PM	WATER	ALS: 2 Non ALS: 0	No	X			
012	0445_SW412_240404		04/04/2024 04:05 PM	WATER	ALS: 2 Non ALS: 0	No	X			
013	0445_SW395_240405		05/04/2024 11:13 AM	WATER	ALS: 2 Non ALS: 0	No	X			
014	0445_SW470_240405		05/04/2024 10:28 AM	WATER	ALS: 2 Non ALS: 0	No	X			

CHAIN OF CUSTODY

(ALS) COC#: 65604 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Offsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
015	0445_SW390_240405		05/04/2024 02:51 PM	WATER	ALS: 2 Non ALS: 0	No	X			
016	0445_SW393_240405		05/04/2024 02:27 PM	WATER	ALS: 2 Non ALS: 0	No	X			
017	0445_SW398_240405		05/04/2024 10:50 AM	WATER	ALS: 6 Non ALS: 0	No	X			
018	0445_SW404_240403		03/04/2024 03:18 PM	WATER	ALS: 6 Non ALS: 0	No	X			Lab internal qc
019	0445_SW416_240404		04/04/2024 04:34 PM	WATER	ALS: 2 Non ALS: 0	No	X			
020	0445_SD424_240405		05/04/2024 07:47 AM	SOIL	ALS: 1 Non ALS: 0	No		X		
021	0445_SD463_240405		05/04/2024 08:16 AM	SOIL	ALS: 1 Non ALS: 0	No		X		

CHAIN OF CUSTODY

(ALS) COC#: 65604 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Offsite

ORDER NO: 304300114

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

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

Random Sample Temperature on Receipt: °C

Other comments:

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

EMAIL INVOICES TO:

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	GW: PFAS Only WATER	S: PFAS Only SEDIMENT	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
022	0445_SD412_240404		04/04/2024 04:04 PM	SOIL	ALS: 1 Non ALS: 0	No		X		
023	0445_SD395_240405		05/04/2024 11:14 AM	SOIL	ALS: 3 Non ALS: 0	No		X		Internal Lab qc

CHAIN OF CUSTODY

(ALS) COC#: 65604 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Offsite

ORDER NO: 304300114

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

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

Random Sample Temperature on Receipt: °C

Other comments:

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

EMAIL INVOICES TO:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0445_MW360_240404	HDPE (no PTFE)	20 mL	00350622024408	Grey	No	
001	0445_MW360_240404	HDPE (no PTFE)	20 mL	00350822024404	Grey	No	
002	0445_MW361_240404	HDPE (no PTFE)	20 mL	00352312012705	Grey	No	
002	0445_MW361_240404	HDPE (no PTFE)	20 mL	00352312012458	Grey	No	
002	0445_MW361_240404	HDPE (no PTFE)	20 mL	00352312012483	Grey	No	
002	0445_MW361_240404	HDPE (no PTFE)	20 mL	00352312012511	Grey	No	
002	0445_MW361_240404	HDPE (no PTFE)	20 mL	00352312012637	Grey	No	
002	0445_MW361_240404	HDPE (no PTFE)	20 mL	00352312012721	Grey	No	
003	0445_MW357_240404	HDPE (no PTFE)	20 mL	00352312012478	Grey	No	
003	0445_MW357_240404	HDPE (no PTFE)	20 mL	00352312012448	Grey	No	
004	0445_MW356_240405	HDPE (no PTFE)	20 mL	00351221001736	Grey	No	
004	0445_MW356_240405	HDPE (no PTFE)	20 mL	00351221002282	Grey	No	
005	0445_SW424_240405	HDPE (no PTFE)	20 mL	00350822024336	Grey	No	
005	0445_SW424_240405	HDPE (no PTFE)	20 mL	00350822024376	Grey	No	
006	0445_SW427_240402	HDPE (no PTFE)	20 mL	00350522020393	Grey	No	
006	0445_SW427_240402	HDPE (no PTFE)	20 mL	00350522020319	Grey	No	
007	0445_SW430_240403	HDPE (no PTFE)	20 mL	00350822033333	Grey	No	
007	0445_SW430_240403	HDPE (no PTFE)	20 mL	00350822032958	Grey	No	
008	0445_SW431_240403	HDPE (no PTFE)	20 mL	00350522020296	Grey	No	
008	0445_SW431_240403	HDPE (no PTFE)	20 mL	00350522020465	Grey	No	
009	0445_SW432_240403	HDPE (no PTFE)	20 mL	00350522020398	Grey	No	
009	0445_SW432_240403	HDPE (no PTFE)	20 mL	00350522020356	Grey	No	
010	0445_SW434_240403	HDPE (no PTFE)	20 mL	00350522020228	Grey	No	
010	0445_SW434_240403	HDPE (no PTFE)	20 mL	00350522020456	Grey	No	
011	0445_SW409_240403	HDPE (no PTFE)	20 mL	00352312012619	Grey	No	
011	0445_SW409_240403	HDPE (no PTFE)	20 mL	00352312012571	Grey	No	

CHAIN OF CUSTODY

COC#: 65604 *ALS Laboratory:* EM Melbourne Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Offsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

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:

012	0445_SW412_240404	HDPE (no PTFE)	20 mL	00350822024402	Grey	No	
012	0445_SW412_240404	HDPE (no PTFE)	20 mL	00350822024422	Grey	No	
013	0445_SW395_240405	HDPE (no PTFE)	20 mL	00350522020330	Grey	No	
013	0445_SW395_240405	HDPE (no PTFE)	20 mL	00350522020431	Grey	No	
014	0445_SW470_240405	HDPE (no PTFE)	20 mL	00350522020242	Grey	No	
014	0445_SW470_240405	HDPE (no PTFE)	20 mL	00350522020344	Grey	No	
015	0445_SW390_240405	HDPE (no PTFE)	20 mL	00352312012540	Grey	No	
015	0445_SW390_240405	HDPE (no PTFE)	20 mL	00352312012457	Grey	No	
016	0445_SW393_240405	HDPE (no PTFE)	20 mL	00352309066107	Grey	No	
016	0445_SW393_240405	HDPE (no PTFE)	20 mL	00352309066095	Grey	No	
017	0445_SW398_240405	HDPE (no PTFE)	20 mL	00350822024233	Grey	No	
017	0445_SW398_240405	HDPE (no PTFE)	20 mL	00352309066318	Grey	No	
017	0445_SW398_240405	HDPE (no PTFE)	20 mL	00352309066249	Grey	No	
017	0445_SW398_240405	HDPE (no PTFE)	20 mL	00352309066323	Grey	No	
017	0445_SW398_240405	HDPE (no PTFE)	20 mL	00350822024270	Grey	No	
017	0445_SW398_240405	HDPE (no PTFE)	20 mL	00352309066223	Grey	No	
018	0445_SW404_240403	HDPE (no PTFE)	20 mL	00352312012572	Grey	No	
018	0445_SW404_240403	HDPE (no PTFE)	20 mL	00352312012474	Grey	No	
018	0445_SW404_240403	HDPE (no PTFE)	20 mL	00352312012479	Grey	No	
018	0445_SW404_240403	HDPE (no PTFE)	20 mL	00352312012555	Grey	No	
018	0445_SW404_240403	HDPE (no PTFE)	20 mL	00352312012556	Grey	No	
018	0445_SW404_240403	HDPE (no PTFE)	20 mL	00352312012463	Grey	No	
019	0445_SW416_240404	HDPE (no PTFE)	20 mL	00352312012685	Grey	No	
019	0445_SW416_240404	HDPE (no PTFE)	20 mL	00352312012592	Grey	No	
020	0445_SD424_240405	HDPE Soil Jar	200 mL	00621018004066	Grey	No	
021	0445_SD463_240405	HDPE Soil Jar	200 mL	00621018004137	Grey	No	
022	0445_SD412_240404	HDPE Soil Jar	200 mL	00621018004027	Grey	No	

CHAIN OF CUSTODY

ALS COC#: 65604 *ALS Laboratory:* EM Melbourne Environmental

CLIENT: MWHAUS - STANTEC AUSTRALIA PTY LTD

PROJECT: VIC_0445_PFASOMP_24

SITE: Offsite

ORDER NO: 304300114

PROJECT MANAGER: [redacted]

PRIMARY SAMPLER:

CONTACT PH: SAMPLER MOBILE:

QUOTE NO: SY/139/19_Bandiana / EM2022MWHAUS0003

EMAIL REPORTS TO: [redacted]

EMAIL INVOICES TO:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	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:			

023	0445_SD395_240405	HDPE Soil Jar	200 mL	00621018004030	Grey	No	
023	0445_SD395_240405	HDPE Soil Jar	200 mL	00621018004034	Grey	No	
023	0445_SD395_240405	HDPE Soil Jar	200 mL	00621018004043	Grey	No	

Total Bottle Count: ALS: 56, Non ALS: 0

QUALITY CONTROL REPORT

Work Order	: **EM2405465**	gl : P	1o f 2o7
CsiPnt	1**STANTEC AUSTRALIA PTY LTD**	LI bf rl tf ry	1Envirf nmPntl sDivieif n MPsbf urnP
Cf ntl ct	1[redacted]	Cf ntl ct	1[redacted]
AddrPee	1[redacted]	AddrPee	1[redacted]
TPsPphf nP	1----	TPsPphf nP	1[redacted]
grf jPct	1VIC_F445_gaASOMg_74	DI tP SI mpsPe RPcPivPd	1F8-Apr-7F74
OrdPr numbPr	13F43FFoo4	DI tP Anl syeie Cf mmPncPd	1oF-Apr-7F74
C-O-C numbPr	1656F4	IeeuP DI tP	1o5-Apr-7F74
SI mpsPr	1[redacted]		
SitP	1O22eitP		
Quf tP numbPr	1SY/o39/o9_BI ndil nl		
Nf . f 2el mpsPe rPcPivPd	173		
Nf . f 2el mpsPe l nl syePd	173		

Thie rPpf rt eupPrePdPe l ny prPvif ue rPpf rt(e) with thie rP2PrPncP. RPeuste l ppsy tf thP el mpsP(e) l e eubmittPd, unsPee thP el mpsin: wl e cf nductPd by ALS. Thie df cumPnt ehl s nf t bP rPprf ducPd, PxcPpt in 2uss

Thie Qul sity Cf ntrf sRPpf rt cf ntl ine thP 2f sef win: in2f rml tif n1

- LI bf rl tf ry Dupsicl tP (DUg) RPpf rt; RPsi tivP gPrcPntl : P Di22PrPncP (Rg D) l nd AccPptl ncP Limite
- MPthf d Bsi nk (MB) l nd LI bf rl tf ry Cf ntrf sSpikP (LCS) RPpf rt; RPcf vPry l nd AccPptl ncP Limite
- MI trix SpikP (MS) RPpf rt; RPcf vPry l nd AccPptl ncP Limite

Signatories

Thie df cumPnt hl e bPPn PsPctrf nicl sy ei: nPd by thP l uthf rizPd ei: nl tf riPe bPsf w. EsPctrf nic ei: nin: ie cl rriPd f ut in cf mpsil ncP with prf cPdurPe epPci2Pd in 7o CaR gl rt oo.

Signatories	*Position*	*Accreditation Category*
[redacted]	Nf n-MPtl se TPl m LPl dPr	MPsbf urnP Inf r: l nice, Sprin: vl sP, VIC
[redacted]	7IC Or: l nic ChPmiet	MPsbf urnP Or: l nice, Sprin: vl sP, VIC

General Comments

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

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

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **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: 5716809)									
EM2405435-020	0445_SD424_240405	EA055: Moisture Content	---	0.1	%	33.2	34.2	3.2	0% - 20%
EM2405446-042	Anonymous	EA055: Moisture Content	---	0.1	%	30.3	31.1	2.7	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5718630)									
EM2405435-020	0445_SD424_240405	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	0.0005	0.0006	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	0.0145	0.0157	7.8	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2405446-046	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	0.0012	0.0010	22.1	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: 5718630)									
EM2405435-020	0445_SD424_240405	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

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: 5718630) - continued									
EM2405435-020	0445_SD424_240405	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
EM2405446-046	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: 5718630)									
EM2405435-020	0445_SD424_240405	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
EM2405446-046	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

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5718630) - continued									
EM2405446-046	Anonymous	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: 5718630)									
EM2405435-020	0445_SD424_240405	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
EM2405446-046	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: 5718630)									
EM2405435-020	0445_SD424_240405	EP231X: Sum of PFAS	---	0.0002	mg/kg	0.0150	0.0163	8.3	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0150	0.0163	8.3	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	---	0.0002	mg/kg	0.0150	0.0163	8.3	0% - 20%
EM2405446-046	Anonymous	EP231X: Sum of PFAS	---	0.0002	mg/kg	0.0012	0.0010	18.2	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0012	0.0010	18.2	No Limit
		EP231X: Sum of PFAS (WA DER List)	---	0.0002	mg/kg	0.0012	0.0010	18.2	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5719708)									
EM2405435-017	0445_SW398_240405	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5719708) - continued									
EM2405435-018	0445_SW404_240403	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5719708)									
EM2405435-017	0445_SW398_240405	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
EM2405435-018	0445_SW404_240403	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5719708)									
EM2405435-017	0445_SW398_240405	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: 5719708) - continued									
EM2405435-017	0445_SW398_240405	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
EM2405435-018	0445_SW404_240403	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: 5719708)									
EM2405435-017	0445_SW398_240405	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
EM2405435-018	0445_SW404_240403	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: 5719708)									
EM2405435-017	0445_SW398_240405	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

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: 5719708) - continued									
EM2405435-018	0445_SW404_240403	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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5718630)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	98.6	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	116	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00114 mg/kg	113	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	93.2	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	102	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	87.0	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5718630)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	119	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	125	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	116	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	116	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.1	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.6	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	111	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	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	0.00312 mg/kg	108	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5718630)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	113	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	100	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	84.2	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.9	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.3	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5718630)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5718630) - 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	0.00119 mg/kg	103	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	0.00121 mg/kg	118	70.0	130
EP231P: PFAS Sums (QCLot: 5718630)								
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**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5719708)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	94.1	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	95.0	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	94.0	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	88.2	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	88.8	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	74.3	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5719708)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	90.5	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	92.8	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	90.3	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	93.1	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	90.7	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	84.3	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	83.1	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	86.0	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	87.3	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	78.6	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	105	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5719708)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	86.6	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

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5719708) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	92.3	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	80.2	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	90.4	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	84.2	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	76.2	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5719708)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	90.2	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	113	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	95.0	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	84.9	70.0	130
EP231P: PFAS Sums (QCLot: 5719708)								
EP231X: Sum of PFAS	---	0.01	µg/L	<0.01	---	---	---	---
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	---	---	---	---
EP231X: Sum of PFAS (WA DER List)	---	0.01	µg/L	<0.01	---	---	---	---

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5718630)							
EM2405435-021	0445_SD463_240405	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	120	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	90.1	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	101	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	84.7	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	76.6	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5718630)							
EM2405435-021	0445_SD463_240405	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	106	71.0	135

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5718630) - continued							
EM2405435-021	0445_SD463_240405	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	97.9	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	96.2	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	104	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	104	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	100	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	103	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	108	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	124	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	133	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5718630)							
EM2405435-021	0445_SD463_240405	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	102	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	96.3	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	92.0	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	82.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	112	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	107	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	102	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5718630)							
EM2405435-021	0445_SD463_240405	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	94.3	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	115	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	114	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	79.6	70.0	130

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5719708)							
EM2405435-002	0445_MW361_240404	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	86.8	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	98.7	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	87.7	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	81.6	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	75.9	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	77.3	53.0	142

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: 5719708)							
EM2405435-002	0445_MW361_240404	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	92.6	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	93.6	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	93.7	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	88.7	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	92.6	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	85.5	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	86.5	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	89.9	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	94.7	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	81.6	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	98.5	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5719708)							
EM2405435-002	0445_MW361_240404	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	80.8	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	92.3	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	84.4	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	79.5	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	89.9	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	78.9	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	71.2	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5719708)							
EM2405435-002	0445_MW361_240404	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	93.0	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	106	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	87.5	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	100	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2405435**	Page	: 1 of 5
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Telephone	: [redacted]
Project	: _ICFj 444FP2ASOMPFR4	Date Samples d eceive-	: j 8HAprHRj R4
Site	: Offsite	Issue Date	: 14HAprHRj R4
Sampler	: [redacted]	NoBof samples receive-	: R3
Or- er number	: 3j 43j j 114	NoBof samples analyse-	: R3

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.

Qrief metho- summaries an- references are also provi- e- to assist in traceabilityB

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagge- in the (uality Control)(C) d eportB

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	EM2405435--021	0445_SD463_240405	**Perfluorooctane sulfonic acid (PFOS)**	1763-23-1	Not Determined	---	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)								
HDPE Soil Jar (EA055) 0445_SD412_240404		04-Apr-2024	---	---	---	10-Apr-2024	18-Apr-2024	✓
HDPE Soil Jar (EA055) 0445_SD424_240405, 0445_SD395_240405	0445_SD463_240405,	05-Apr-2024	---	---	---	10-Apr-2024	19-Apr-2024	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X) 0445_SD412_240404		04-Apr-2024	12-Apr-2024	01 Oct 2024	✓	15-Apr-2024	22 May 2024	✓
HDPE Soil Jar (EP231X) 0445_SD424_240405, 0445_SD395_240405	0445_SD463_240405,	05-Apr-2024	12-Apr-2024	02 Oct 2024	✓	15-Apr-2024	22 May 2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X) 0445_SD412_240404		04-Apr-2024	12-Apr-2024	01-Oct-2024	✓	15-Apr-2024	22-May-2024	✓
HDPE Soil Jar (EP231X) 0445_SD424_240405, 0445_SD395_240405	0445_SD463_240405,	05-Apr-2024	12-Apr-2024	02-Oct-2024	✓	15-Apr-2024	22-May-2024	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE Soil Jar (EP231X) 0445_SD412_240404		04-Apr-2024	12-Apr-2024	01-Oct-2024	✓	15-Apr-2024	22-May-2024	✓
HDPE Soil Jar (EP231X) 0445_SD424_240405, 0445_SD395_240405	0445_SD463_240405,	05-Apr-2024	12-Apr-2024	02-Oct-2024	✓	15-Apr-2024	22-May-2024	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X) 0445_SD412_240404		04-Apr-2024	12-Apr-2024	01-Oct-2024	✓	15-Apr-2024	22-May-2024	✓
HDPE Soil Jar (EP231X) 0445_SD424_240405, 0445_SD395_240405	0445_SD463_240405,	05-Apr-2024	12-Apr-2024	02-Oct-2024	✓	15-Apr-2024	22-May-2024	✓
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X) 0445_SD412_240404		04-Apr-2024	12-Apr-2024	01-Oct-2024	✓	15-Apr-2024	22-May-2024	✓
HDPE Soil Jar (EP231X) 0445_SD424_240405, 0445_SD395_240405	0445_SD463_240405,	05-Apr-2024	12-Apr-2024	02-Oct-2024	✓	15-Apr-2024	22-May-2024	✓

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0445_SW427_240402		02-Apr-2024	11-Apr-2024	29-Sep-2024	✓	12-Apr-2024	29-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_SW430_240403, 0445_SW432_240403, 0445_SW409_240403,	0445_SW431_240403, 0445_SW434_240403, 0445_SW404_240403	03-Apr-2024	11-Apr-2024	30-Sep-2024	✓	12-Apr-2024	30-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW360_240404, 0445_MW357_240404, 0445_SW416_240404	0445_MW361_240404, 0445_SW412_240404,	04-Apr-2024	11-Apr-2024	01-Oct-2024	✓	12-Apr-2024	01-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW356_240405, 0445_SW395_240405, 0445_SW390_240405, 0445_SW398_240405	0445_SW424_240405, 0445_SW470_240405, 0445_SW393_240405,	05-Apr-2024	11-Apr-2024	02-Oct-2024	✓	12-Apr-2024	02-Oct-2024	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0445_SW427_240402	02-Apr-2024	11-Apr-2024	29-Sep-2024	✓	12-Apr-2024	29-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_SW430_240403, 0445_SW431_240403, 0445_SW432_240403, 0445_SW434_240403, 0445_SW409_240403, 0445_SW404_240403	03-Apr-2024	11-Apr-2024	30-Sep-2024	✓	12-Apr-2024	30-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW360_240404, 0445_MW361_240404, 0445_MW357_240404, 0445_SW412_240404, 0445_SW416_240404	04-Apr-2024	11-Apr-2024	01-Oct-2024	✓	12-Apr-2024	01-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW356_240405, 0445_SW424_240405, 0445_SW395_240405, 0445_SW470_240405, 0445_SW390_240405, 0445_SW393_240405, 0445_SW398_240405	05-Apr-2024	11-Apr-2024	02-Oct-2024	✓	12-Apr-2024	02-Oct-2024	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0445_SW427_240402	02-Apr-2024	11-Apr-2024	29-Sep-2024	✓	12-Apr-2024	29-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_SW430_240403, 0445_SW431_240403, 0445_SW432_240403, 0445_SW434_240403, 0445_SW409_240403, 0445_SW404_240403	03-Apr-2024	11-Apr-2024	30-Sep-2024	✓	12-Apr-2024	30-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW360_240404, 0445_MW361_240404, 0445_MW357_240404, 0445_SW412_240404, 0445_SW416_240404	04-Apr-2024	11-Apr-2024	01-Oct-2024	✓	12-Apr-2024	01-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW356_240405, 0445_SW424_240405, 0445_SW395_240405, 0445_SW470_240405, 0445_SW390_240405, 0445_SW393_240405, 0445_SW398_240405	05-Apr-2024	11-Apr-2024	02-Oct-2024	✓	12-Apr-2024	02-Oct-2024	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0445_SW427_240402	02-Apr-2024	11-Apr-2024	29-Sep-2024	✓	12-Apr-2024	29-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_SW430_240403, 0445_SW431_240403, 0445_SW432_240403, 0445_SW434_240403, 0445_SW409_240403, 0445_SW404_240403	03-Apr-2024	11-Apr-2024	30-Sep-2024	✓	12-Apr-2024	30-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW360_240404, 0445_MW361_240404, 0445_MW357_240404, 0445_SW412_240404, 0445_SW416_240404	04-Apr-2024	11-Apr-2024	01-Oct-2024	✓	12-Apr-2024	01-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW356_240405, 0445_SW424_240405, 0445_SW395_240405, 0445_SW470_240405, 0445_SW390_240405, 0445_SW393_240405, 0445_SW398_240405	05-Apr-2024	11-Apr-2024	02-Oct-2024	✓	12-Apr-2024	02-Oct-2024	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0445_SW427_240402	02-Apr-2024	11-Apr-2024	29-Sep-2024	✓	12-Apr-2024	29-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_SW430_240403, 0445_SW431_240403, 0445_SW432_240403, 0445_SW434_240403, 0445_SW409_240403, 0445_SW404_240403	03-Apr-2024	11-Apr-2024	30-Sep-2024	✓	12-Apr-2024	30-Sep-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW360_240404, 0445_MW361_240404, 0445_MW357_240404, 0445_SW412_240404, 0445_SW416_240404	04-Apr-2024	11-Apr-2024	01-Oct-2024	✓	12-Apr-2024	01-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0445_MW356_240405, 0445_SW424_240405, 0445_SW395_240405, 0445_SW470_240405, 0445_SW390_240405, 0445_SW393_240405, 0445_SW398_240405	05-Apr-2024	11-Apr-2024	02-Oct-2024	✓	12-Apr-2024	02-Oct-2024	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.

Preparation Methods	Method	Matrix	Method Descriptions
QuEChoRS 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.

CERTIFICATE OF ANALYSIS

Work Order	: **EM2405465**	Page	: 1 of 13
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: ----	Telephone	: [redacted]
Project	: VIC_0445_PFASOMP_24	Date Samples Received	: 08-Apr-2024 15:40
Order number	: 304300114	Date Analysis Commenced	: 10-Apr-2024
C-O-C number	: 65604	Issue Date	: 15-Apr-2024 13:07
Sampler	: [redacted]		
Site	: Offsite		
Quote number	: SY/139/19_Bandiana		
No. of samples received	: 23		
No. of samples analysed	: 23		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
[redacted]	Non-Metals Team Leader	Melbourne Inorganics, Springvale, VIC
[redacted]	2IC Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

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

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

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

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

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

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

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

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per tables in USEPA 1633 where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where LISTED. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0445_MW360_240404	0445_MW361_240404	0445_MW357_240404	0445_MW356_240405	----
			Sampling date / time	04-Apr-2024 14:20	04-Apr-2024 16:35	04-Apr-2024 15:09	05-Apr-2024 12:35	---
Compound	CAS Number	LOR	Unit	EM2405435-001	EM2405435-002	EM2405435-003	EM2405435-004	-------
				Result	Result	Result	Result	---
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	**0.02**	0.02	0.02	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	**0.03**	**0.20**	**0.02**	**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	**0.04**	**0.10**	**0.02**	<0.01	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	**0.04**	<0.02	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	**0.05**	<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	**0.03**	<0.01	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0445_MW360_240404	0445_MW361_240404	0445_MW357_240404	0445_MW356_240405	----
				Sampling date / time	04-Apr-2024 14:20	04-Apr-2024 16:35	04-Apr-2024 15:09	05-Apr-2024 12:35	---
Compound	CAS Number	LOR	Unit		EM2405435-001	EM2405435-002	EM2405435-003	EM2405435-004	-------
					Result	Result	Result	Result	---
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		**0.07**	**0.46**	**0.04**	**0.01**	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.07**	**0.30**	**0.04**	**0.01**	----
Sum of PFAS (WA DER List)	---	0.01	µg/L		**0.07**	**0.44**	**0.04**	**0.01**	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		**95.2**	**100**	**104**	**92.6**	----
13C8-PFOA	---	0.02	%		**101**	**101**	**103**	**98.0**	----

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)			Sample ID	0445_SD424_240405	0445_SD463_240405	0445_SD412_240404	0445_SD395_240405	----
			Sampling date / time	05-Apr-2024 07:47	05-Apr-2024 08:16	04-Apr-2024 16:04	05-Apr-2024 11:14	----
Compound	CAS Number	LOR	Unit	EM2405435-020	EM2405435-021	EM2405435-022	EM2405435-023	----
				Result	Result	Result	Result	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	33.2	9.8	46.3	46.9	----
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	0.0005	0.0006	<0.0002	0.0004	----
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	0.0145	0.0091	0.0024	0.0040	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0002	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	<0.001	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<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								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0445_SD424_240405	0445_SD463_240405	0445_SD412_240404	0445_SD395_240405	----
				Sampling date / time	05-Apr-2024 07:47	05-Apr-2024 08:16	04-Apr-2024 16:04	05-Apr-2024 11:14	---
Compound	CAS Number	LOR	Unit		EM2405435-020	EM2405435-021	EM2405435-022	EM2405435-023	----------
					Result	Result	Result	Result	---
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	<0.0005	----
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		**0.0150**	**0.0097**	**0.0024**	**0.0046**	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0150**	**0.0097**	**0.0024**	**0.0044**	----
Sum of PFAS (WA DER List)	---	0.0002	mg/kg		**0.0150**	**0.0097**	**0.0024**	**0.0044**	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.0002	%		**94.2**	**84.9**	**91.5**	**88.4**	----
13C8-PFOA	---	0.0002	%		**96.8**	**106**	**95.3**	**97.8**	----

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	0445_SW424_240405	0445_SW427_240402	0445_SW430_240403	0445_SW431_240403	0445_SW432_240403
			Sampling date / time	05-Apr-2024 07:47	02-Apr-2024 17:35	03-Apr-2024 15:05	03-Apr-2024 15:14	03-Apr-2024 14:19
Compound	CAS Number	LOR	Unit	EM2405435-005	EM2405435-006	EM2405435-007	EM2405435-008	EM2405435-009
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	**0.01**	0.01	0.01	0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.02	0.02	0.02	0.02	0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.01	**0.04**	**0.02**	**0.04**	**0.03**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	0.02	0.02	0.02	0.02	0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0445_SW424_240405	0445_SW427_240402	0445_SW430_240403	0445_SW431_240403	0445_SW432_240403
				Sampling date / time	05-Apr-2024 07:47	02-Apr-2024 17:35	03-Apr-2024 15:05	03-Apr-2024 15:14	03-Apr-2024 14:19
Compound	CAS Number	LOR	Unit		EM2405435-005	EM2405435-006	EM2405435-007	EM2405435-008	EM2405435-009
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		<0.01	0.05	0.02	0.04	0.03
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	0.05	0.02	0.04	0.03
Sum of PFAS (WA DER List)	---	0.01	µg/L		<0.01	0.05	0.02	0.04	0.03
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		100	96.8	101	94.1	100
13C8-PFOA	---	0.02	%		99.5	101	103	99.7	101

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	0445_SW434_240403	0445_SW409_240403	0445_SW412_240404	0445_SW395_240405	0445_SW470_240405
			Sampling date / time	03-Apr-2024 13:52	03-Apr-2024 15:19	04-Apr-2024 16:05	05-Apr-2024 11:13	05-Apr-2024 10:28
Compound	CAS Number	LOR	Unit	EM2405435-010	EM2405435-011	EM2405435-012	EM2405435-013	EM2405435-014
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	**0.04**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	**0.03**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	**0.07**	**0.27**
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	**0.02**	**0.02**	**0.08**	**0.23**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	0.02	0.02	0.02	0.02	0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0445_SW434_240403	0445_SW409_240403	0445_SW412_240404	0445_SW395_240405	0445_SW470_240405
				Sampling date / time	03-Apr-2024 13:52	03-Apr-2024 15:19	04-Apr-2024 16:05	05-Apr-2024 11:13	05-Apr-2024 10:28
Compound	CAS Number	LOR	Unit		EM2405435-010	EM2405435-011	EM2405435-012	EM2405435-013	EM2405435-014
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		<0.01	0.02	0.02	0.15	0.57
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	0.02	0.02	0.15	0.50
Sum of PFAS (WA DER List)	---	0.01	µg/L		<0.01	0.02	0.02	0.15	0.54
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		94.8	98.5	96.7	91.3	96.7
13C8-PFOA	---	0.02	%		97.9	100	103	102	99.8

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	0445_SW390_240405	0445_SW393_240405	0445_SW398_240405	0445_SW404_240403	0445_SW416_240404
			Sampling date / time	05-Apr-2024 14:51	05-Apr-2024 14:27	05-Apr-2024 10:50	03-Apr-2024 15:18	04-Apr-2024 16:34
Compound	CAS Number	LOR	Unit	EM2405435-015	EM2405435-016	EM2405435-017	EM2405435-018	EM2405435-019
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0445_SW390_240405	0445_SW393_240405	0445_SW398_240405	0445_SW404_240403	0445_SW416_240404
				Sampling date / time	05-Apr-2024 14:51	05-Apr-2024 14:27	05-Apr-2024 10:50	03-Apr-2024 15:18	04-Apr-2024 16:34
Compound	CAS Number	LOR	Unit		EM2405435-015	EM2405435-016	EM2405435-017	EM2405435-018	EM2405435-019
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	---	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFAS (WA DER List)	---	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		101	93.4	93.2	105	101
13C8-PFOA	---	0.02	%		98.2	102	104	101	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

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	---	68	136
13C8-PFOA	---	69	133

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

Chain of Custody

Sheet 1 of 2

PM Name: [redacted]
Phone: [redacted]
Address: [redacted]
PM Email: [redacted]
Project Number: DEF19008 - 30430014
Laboratory (name, phone,fax no & contact person)

	Sample ID	Laboratory ID	Container	Sampling Date	Sampling Time	Soil	Water	Ice/Ice Bricks	PFAS 28
1	0445_MW412_240530		2x PFAS Bottle	30/5/24			X		X
2	0445_MW411_240530		↓	↓			↓		X
3	0445_MW413_240530		↓	↓			↓		X
4	0445_MW415_240530		↓	↓			↓		X
5	0445_MW303_240531		↓	31/5/24			↓		X
6	0445_MW305_240531		↓	↓			↓		X
7	0445_SW310_240531		↓	↓			↓		X
8	0445_SW311_240531		↓	↓			↓		X
9	0445_SW316_240531		↓	↓			↓		X
10	0445_SW321_240531		↓	↓			↓		X
11	0445_SW322_240531		↓	↓			↓		X
12	0445_SW323_240531		↓	↓			↓		X
13	0445_SW333_240531		↓	↓			↓		X
14	0445_SW332_240531		↓	↓			↓		X
15	0445_SW340_240531		↓	↓			↓		X

Environmental Division
Melbourne
Work Order Reference
EM2409333

Telephone : + 61-3-8549 9600

Sampler: I attest that the proper field sampling proceedures were used during the collection of these samples. [redacted] Date: 4/6/24

Relinquished by (Sampler): (print and signature)	Date		Received by: (print and signature)	Date		Time
Relinquished by: (print and signature)	Date	Time	[redacted]	4/6	4	11:55
Relinquished by: (print and signature)	Date	Time	Received by: (print and signature)	Date		Time

Please supply results electronically in spreadsheet and ESDAT files.

Turn around time: (24 hour/48 hour/3 days/5 days) Please circle

Chain of Custody

Sheet 2 of 2

	PM Name: [redacted]				Sample Matrix					Sample preservation				Analysis															
	Phone: [redacted]																											
	Address: [redacted]																											
	PM Email: [redacted]																											
	Project Number:																											
	Laboratory (name, phone,fax no & contact person)																											
	Sample ID 240531	Laboratory ID	Container	Sampling Date	Sampling Time	Soil	Water			Ice/Ice Bricks				PFAS 28															
16	0445_SW462_240531		2x PFAS	31/05/24			X							X															
17	0445_QC100_240530		↓	30/5/24			↓							X															
18	0445_QC101_240531			31/5/24										X															
19	0445_QC102_240531			31/5/24										X															
20	0445_QC200_240530			30/5/24										[redacted]															
21	0445_QC201_240531			31/5/24										[redacted]															
22	0445_QC202_240531			31/5/24										[redacted]															
23	" _QC300_240530			30/5/24										X															
24	" _QC301_240531			31/5/24										X															
25	" _QC500_240531		↓	31/5/24			↓							X															
Add. 26	" _MW313_240531			31/5/24																									

Forward to Eurofins ....

Sampler: I attest that the proper field sampling proceedures were used during the collection of these samples. **Sampler name:** (print and signature) Date:

Relinquished by (Sampler): (print and signature)	Date	Time	Received by (Courier/Lab): (print and signature)	Date	Time
Relinquished by: (print and signature)	Date	Time	[redacted]	Date 4/6	Time 11:45
Relinquished by: (print and signature)	Date	Time		Date	Time

Please supply results electronically in spreadsheet and ESDAT files.

Turn around time: (24 hour/48 hour/3 days/5 days) Please circle

QUALITY CONTROL REPORT

Work Order	: **EM2409333**	Page	: 1 of 2
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Contact	: [redacted]
Address	: Level 7V82. . Rourke St MELRORHNE T. . .	Address	: [redacted]
6elep4one	: qqqp	6elep4one	: [redacted]
Pro5ect	: DEF1- . . V pT. UT. . 11U	Date Samples Heceived	: . Upkunp7. 7U
Order number	: qqqp	Date Analysis Commenced	: . - pkunp7. 7U
CpOpC number	: qqqp	Issue Date	: 11pkunp7. 7U
Sampler	: [redacted]		
Site	: DEF1- . . V8HAAF B illiams Laverton		
9 uote number	: Sj _1T- _1- QLaverton		
No0of samples received	: 77		
No0of samples analysed	: 77		

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

64is report supersedes any previous report\s/ (it4 t4is reference0 Hesults apply to t4e sample\s/ as submitted8 unless t4e sampling (as conducted by ALS0 64is document s4all not be reproduced8e) cept in full0

64is 9 uality Control Heport contains t4e follo(ing information:

- Laboratory Duplicate \DRP/ Heport\Helative Percentage Difference \HPD/ and Acceptance Limits
- Met4od Rlank \MR/ and Laboratory Control Spike \LCS/ Heport\Hecovery and Acceptance Limits
- Matri) Spike \MS/ Heport\Hecovery and Acceptance Limits

Signatories

64is document 4as been electronically signed by t4e aut4orixed signatories belo(0Electronic signing is carried out in compliance (it4 procedures specified in 71 CFH Part 110

Signatories	*Position*	*Accreditation Category*
[redacted]	Senior Organic C4emist	Melbourne Organics8Springvale8, IC

General Comments

64e analytical procedures used by ALS 4ave been developed from establis4ed internationally recognised procedures suc4 as t4ose publis4ed by t4e RSEPA8 AP; A8 AS and NEPM0 In 4ouse developed procedures are fully validated and are often at t4e client rezuest0

B 4ere moisture determination 4as been performed8results are reported on a dry (eig4t basis0

B 4ere a reported less t4an Y</ result is 4ig4er t4an t4e LOH8 t4is may be due to primary sample e) tract_digestate dilution and_or insufficient sample for analysis0 B 4ere t4e LOH of a reported result differs from standard LOH8t4is may be due to 4ig4 moisture content8insufficient sample Yreduced (eig4t employed/ or matri) interference0

Key : Anonymous = Hefers to samples (4ic4 are not specifically part of t4is (ork order but formed part of t4e 9 C process lot
CAS Number = CAS registry number from database maintained by C4emical Abstracts Services064e C4emical Abstracts Service is a division of t4e American C4emical Society0
LOH = Limit of reporting
HPD = Helative Percentage Difference
# = Indicates failed 9 C

Laboratory Duplicate (DUP) Report

64e zuality control term Laboratory Duplicate refers to a randomly selected intralaboratory split0 Laboratory duplicates provide information regarding met4od precision and sample 4eterogeneity0 64e permitted ranges for t4e Helative Percent Deviation YHPD/ of Laboratory Duplicates are specified in ALS Met4od 9 B IpEN_TV and are dependent on t4e magnitude of results in comparison to t4e level of reporting: Hesult < 1. times LOH: No LimitwHesult bet(een 1. and 7. times LOH: . % p- . %wHesult > 7. times LOH: . % p7. %0

- **No Laboratory Duplicate (DUP) Results are required to be reported.**

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

64e zuality control term Met4od _ Laboratory Rlank refers to an analyte free matri) to (4ic4 all reagents are added in t4e same volumes or proportions as used in standard sample preparation0 64e purpose of t4is 9 C parameter is to monitor potential laboratory contamination0 64e zuality control term Laboratory Control Sample YLCS/ refers to a certified reference material8 or a kno(n interference free matri) spiked (it4 target analytes064e purpose of t4is 9 C parameter is to monitor met4od precision and accuracy independent of sample matri) 0Dynamic Hecovery Limits are based on statistical evaluation of processed LCS0

SubpMatri) : **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5840330)								
EP7T1S: Perfluoropropane sulfonic acid YPFPrS/	U7TpU1p2	. 0 7	µg L	<. 0 7	. 0T µg L	1. U	3. 0	1T.
EP7T1S: Perfluorobutane sulfonic acid YPFRS/	T3- p3Tp-	. 0 7	µg L	<. 0 7	. 077 µg L	1. 2	370	1T.
EP7T1S: Perfluoropentane sulfonic acid YPFPeS/	73. 2p- 1pU	. 0 7	µg L	<. 0 7	. 0T- µg L	1. 1	310	173
EP7T1S: Perfluoro4e) ane sulfonic acid YPF;) S/	T- - pU2pU	. 0 1	µg L	<. 0 1	. 07V µg L	- V0-	2V0	1T1
EP7T1S: Perfluoro4eptane sulfonic acid YPF; pS/	T3- p- 7pV	. 0 7	µg L	<. 0 7	. 0TV µg L	- V0-	2- 0	1TU
EP7T1S: Perfluorooctane sulfonic acid YPFOS/	132Tp7Tp1	. 0 1	µg L	<. 0 1	. 0T7 µg L	- - 0-	2- 0	1U.
EP7T1S: Perfluorononane sulfonic acid YPFNS/	2V7- - p17p1	. 0 7	µg L	<. 0 7	. 0U µg L	V- 02	2- 0	173
EP7T1S: Perfluorodecane sulfonic acid YPFDS/	TT- p33pT	. 0 7	µg L	<. 0 7	. 0U1 µg L	V10	- T0	1U7
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5840750)								
EP7T1S: Perfluoropropane sulfonic acid YPFPrS/	U7TpU1p2	. 0 7	µg L	<. 0 7	. 0T µg L	- - 02	3. 0	1T.
EP7T1S: Perfluorobutane sulfonic acid YPFRS/	T3- p3Tp-	. 0 7	µg L	<. 0 7	. 077 µg L	- - 0V	370	1T.
EP7T1S: Perfluoropentane sulfonic acid YPFPeS/	73. 2p- 1pU	. 0 7	µg L	<. 0 7	. 0T- µg L	- 20-	310	173
EP7T1S: Perfluoro4e) ane sulfonic acid YPF;) S/	T- - pU2pU	. 0 1	µg L	<. 0 1	. 07V µg L	- 30I	2V0	1T1
EP7T1S: Perfluoro4eptane sulfonic acid YPF; pS/	T3- p- 7pV	. 0 7	µg L	<. 0 7	. 0TV µg L	- - 0	2- 0	1TU
EP7T1S: Perfluorooctane sulfonic acid YPFOS/	132Tp7Tp1	. 0 1	µg L	<. 0 1	. 0T7 µg L	- U03	2- 0	1U.
EP7T1S: Perfluorononane sulfonic acid YPFNS/	2V7- - p17p1	. 0 7	µg L	<. 0 7	. 0U µg L	- . 0V	2- 0	173
EP7T1S: Perfluorodecane sulfonic acid YPFDS/	TT- p33pT	. 0 7	µg L	<. 0 7	. 0U1 µg L	V30T	- T0	1U7
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5841732)								
EP7T1S: Perfluoropropane sulfonic acid YPFPrS/	U7TpU1p2	. 0 7	µg L	<. 0 7	. 0T µg L	1. 1	3. 0	1T.
EP7T1S: Perfluorobutane sulfonic acid YPFRS/	T3- p3Tp-	. 0 7	µg L	<. 0 7	. 077 µg L	- V0T	370	1T.
EP7T1S: Perfluoropentane sulfonic acid YPFPeS/	73. 2p- 1pU	. 0 7	µg L	<. 0 7	. 0T- µg L	- 30	310	173
EP7T1S: Perfluoro4e) ane sulfonic acid YPF;) S/	T- - pU2pU	. 0 1	µg L	<. 0 1	. 07V µg L	- 303	2V0	1T1
EP7T1S: Perfluoro4eptane sulfonic acid YPF; pS/	T3- p- 7pV	. 0 7	µg L	<. 0 7	. 0TV µg L	- 70V	2- 0	1TU
EP7T1S: Perfluorooctane sulfonic acid YPFOS/	132Tp7Tp1	. 0 1	µg L	<. 0 1	. 0T7 µg L	- U0V	2- 0	1U.
EP7T1S: Perfluorononane sulfonic acid YPFNS/	2V7- - p17p1	. 0 7	µg L	<. 0 7	. 0U µg L	- U07	2- 0	173
EP7T1S: Perfluorodecane sulfonic acid YPFDS/	TT- p33pT	. 0 7	µg L	<. 0 7	. 0U1 µg L	- V0V	- T0	1U7
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5840330)								
EP7T1S: Perfluorobutanoic acid YPFRA/	T3- p77pU	. 0I	µg L	<. 0I	10T- µg L	- T0T	3T0	17-
EP7T1S: Perfluoropentanoic acid YPFPeA/	73. 2p- . pT	. 0 7	µg L	<. 0 7	. 0T- µg L	- 70I	370	17-
EP7T1S: Perfluoro4e) anoic acid YPF;) A/	T. 3p7UpU	. 0 7	µg L	<. 0 7	. 0T- µg L	- U0T	370	17-

SubpMatri) : **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5840330) - continued								
EP7T1S: Perfluoro4eptanoic acid YPF; pA/	T3- pV- p-	. 0 7	µg L	<. 0 7	. 07- µg L	- - 07	370	1T.
EP7T1S: Perfluorooctanoic acid YPFOA/	TT- p23p1	. 0 1	µg L	<. 0 1	. 07- µg L	- 20	310	1TT
EP7T1S: Perfluorononanoic acid YPFNA/	T3- p- - p1	. 0 7	µg L	<. 0 7	. 07- µg L	VT03	2- 0	1T.
EP7T1S: Perfluorodecanoic acid YPFDA/	TT- p32p7	. 0 7	µg L	<. 0 7	. 07- µg L	- . 03	310	17-
EP7T1S: Perfluoroundecanoic acid YPFRnDA/	7. - Vp- UpV	. 0 7	µg L	<. 0 7	. 07- µg L	- U0	2- 0	1TT
EP7T1S: Perfluorododecanoic acid YPFDoDA/	T. 3p- - p1	. 0 7	µg L	<. 0 7	. 07- µg L	- V01	370	1TU
EP7T1S: Perfluorotridecanoic acid YPF6rDA/	3727- p- UpV	. 0 7	µg L	<. 0 7	. 07- µg L	V30	2- 0	1UU
EP7T1S: Perfluorotetradecanoic acid YPF6eDA/	T32p 2p3	. 0 -	µg L	<. 0 -	. 027- µg L	V. 0T	310	1T7
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5840750)								
EP7T1S: Perfluorobutanoic acid YPFRA/	T3- p77pU	. 01	µg L	<. 01	107- µg L	- - 0V	3T0	17-
EP7T1S: Perfluoropentanoic acid YPFPeA/	73. 2p- . pT	. 0 7	µg L	<. 0 7	. 07- µg L	- T01	370	17-
EP7T1S: Perfluoro4e) anoic acid YPF;) A/	T. 3p7UpU	. 0 7	µg L	<. 0 7	. 07- µg L	- 70U	370	17-
EP7T1S: Perfluoro4eptanoic acid YPF; pA/	T3- pV- p-	. 0 7	µg L	<. 0 7	. 07- µg L	- 70	370	1T.
EP7T1S: Perfluorooctanoic acid YPFOA/	TT- p23p1	. 0 1	µg L	<. 0 1	. 07- µg L	- U03	310	1TT
EP7T1S: Perfluorononanoic acid YPFNA/	T3- p- - p1	. 0 7	µg L	<. 0 7	. 07- µg L	V10T	2- 0	1T.
EP7T1S: Perfluorodecanoic acid YPFDA/	TT- p32p7	. 0 7	µg L	<. 0 7	. 07- µg L	- U01	310	17-
EP7T1S: Perfluoroundecanoic acid YPFRnDA/	7. - Vp- UpV	. 0 7	µg L	<. 0 7	. 07- µg L	- 30V	2- 0	1TT
EP7T1S: Perfluorododecanoic acid YPFDoDA/	T. 3p- - p1	. 0 7	µg L	<. 0 7	. 07- µg L	- - 0	370	1TU
EP7T1S: Perfluorotridecanoic acid YPF6rDA/	3727- p- UpV	. 0 7	µg L	<. 0 7	. 07- µg L	1. U	2- 0	1UU
EP7T1S: Perfluorotetradecanoic acid YPF6eDA/	T32p 2p3	. 0 -	µg L	<. 0 -	. 027- µg L	- U02	310	1T7
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5841732)								
EP7T1S: Perfluorobutanoic acid YPFRA/	T3- p77pU	. 01	µg L	<. 01	107- µg L	- . 03	3T0	17-
EP7T1S: Perfluoropentanoic acid YPFPeA/	73. 2p- . pT	. 0 7	µg L	<. 0 7	. 07- µg L	- 102	370	17-
EP7T1S: Perfluoro4e) anoic acid YPF;) A/	T. 3p7UpU	. 0 7	µg L	<. 0 7	. 07- µg L	- T0	370	17-
EP7T1S: Perfluoro4eptanoic acid YPF; pA/	T3- pV- p-	. 0 7	µg L	<. 0 7	. 07- µg L	- - 0	370	1T.
EP7T1S: Perfluorooctanoic acid YPFOA/	TT- p23p1	. 0 1	µg L	<. 0 1	. 07- µg L	- T01	310	1TT
EP7T1S: Perfluorononanoic acid YPFNA/	T3- p- - p1	. 0 7	µg L	<. 0 7	. 07- µg L	VT02	2- 0	1T.
EP7T1S: Perfluorodecanoic acid YPFDA/	TT- p32p7	. 0 7	µg L	<. 0 7	. 07- µg L	V- 03	310	17-
EP7T1S: Perfluoroundecanoic acid YPFRnDA/	7. - Vp- UpV	. 0 7	µg L	<. 0 7	. 07- µg L	- 30V	2- 0	1TT
EP7T1S: Perfluorododecanoic acid YPFDoDA/	T. 3p- - p1	. 0 7	µg L	<. 0 7	. 07- µg L	1. 7	370	1TU
EP7T1S: Perfluorotridecanoic acid YPF6rDA/	3727- p- UpV	. 0 7	µg L	<. 0 7	. 07- µg L	1. -	2- 0	1UU
EP7T1S: Perfluorotetradecanoic acid YPF6eDA/	T32p 2p3	. 0 -	µg L	<. 0 -	. 027- µg L	1. T	310	1T7
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5840330)								
EP7T1S: Perfluorooctane sulfonamide YFOSA/	3- Up- 1p2	. 0 7	µg L	<. 0 7	. 07- µg L	- T02	230	1T3

SubpMatri) : **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5840330) - continued								
EP7T1S: NpMet4yl perfluorooctane sulfonamide YMeFOSA/	T1- . 2pT7pV/	. 0 -	µg L	<. 0 -	. 027- µg L	1. 7	2V0	1U1
EP7T1S: NpEt4yl perfluorooctane sulfonamide YEtFOSA/	U1- 1p- . p7	. 0 -	µg L	<. 0 -	. 027- µg L	- - 02	3. 0	1T.
EP7T1S: NpMet4yl perfluorooctane sulfonamidoet4anol YMeFOSE/	7UUUVp - p3	. 0 -	µg L	<. 0 -	. 027- µg L	- 10V	3. 0	1T.
EP7T1S: NpEt4yl perfluorooctane sulfonamidoet4anol YEtFOSE/	12- 1p- - p7	. 0 -	µg L	<. 0 -	. 027- µg L	- 70I	3. 0	1T.
EP7T1S: NpMet4yl perfluorooctane sulfonamidoacetic acid YMeFOSAA/	7T- - pT1p-	. 0 7	µg L	<. 0 7	. 07- µg L	1. V	2- 0	1T2
EP7T1S: NpEt4yl perfluorooctane sulfonamidoacetic acid YEtFOSAA/	7- - 1p- . p2	. 0 7	µg L	<. 0 7	. 07- µg L	- . 0-	210	1T-
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5840750)								
EP7T1S: Perfluorooctane sulfonamide YFOSA/	3- Up- 1p2	. 0 7	µg L	<. 0 7	. 07- µg L	- T0V	230	1T3
EP7T1S: NpMet4yl perfluorooctane sulfonamide YMeFOSA/	T1- . 2pT7pV/	. 0 -	µg L	<. 0 -	. 027- µg L	- V0T	2V0	1U1
EP7T1S: NpEt4yl perfluorooctane sulfonamide YEtFOSA/	U1- 1p- . p7	. 0 -	µg L	<. 0 -	. 027- µg L	- - 03	3. 0	1T.
EP7T1S: NpMet4yl perfluorooctane sulfonamidoet4anol YMeFOSE/	7UUUVp - p3	. 0 -	µg L	<. 0 -	. 027- µg L	1. U	3. 0	1T.
EP7T1S: NpEt4yl perfluorooctane sulfonamidoet4anol YEtFOSE/	12- 1p- - p7	. 0 -	µg L	<. 0 -	. 027- µg L	- 202	3. 0	1T.
EP7T1S: NpMet4yl perfluorooctane sulfonamidoacetic acid YMeFOSAA/	7T- - pT1p-	. 0 7	µg L	<. 0 7	. 07- µg L	- - 0-	2- 0	1T2
EP7T1S: NpEt4yl perfluorooctane sulfonamidoacetic acid YEtFOSAA/	7- - 1p- . p2	. 0 7	µg L	<. 0 7	. 07- µg L	- V03	210	1T-
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5841732)								
EP7T1S: Perfluorooctane sulfonamide YFOSA/	3- Up- 1p2	. 0 7	µg L	<. 0 7	. 07- µg L	- U0I	230	1T3
EP7T1S: NpMet4yl perfluorooctane sulfonamide YMeFOSA/	T1- . 2pT7pV/	. 0 -	µg L	<. 0 -	. 027- µg L	11U	2V0	1U1
EP7T1S: NpEt4yl perfluorooctane sulfonamide YEtFOSA/	U1- 1p- . p7	. 0 -	µg L	<. 0 -	. 027- µg L	1. 1	3. 0	1T.
EP7T1S: NpMet4yl perfluorooctane sulfonamidoet4anol YMeFOSE/	7UUUVp - p3	. 0 -	µg L	<. 0 -	. 027- µg L	VV0U	3. 0	1T.
EP7T1S: NpEt4yl perfluorooctane sulfonamidoet4anol YEtFOSE/	12- 1p- - p7	. 0 -	µg L	<. 0 -	. 027- µg L	11V	3. 0	1T.
EP7T1S: NpMet4yl perfluorooctane sulfonamidoacetic acid YMeFOSAA/	7T- - pT1p-	. 0 7	µg L	<. 0 7	. 07- µg L	11.	2- 0	1T2
EP7T1S: NpEt4yl perfluorooctane sulfonamidoacetic acid YEtFOSAA/	7- - 1p- . p2	. 0 7	µg L	<. 0 7	. 07- µg L	1. 7	210	1T-
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5840330)								
EP7T1S: U:7 Fluorotelomer sulfonic acid YU:7 F6S/	3- 317Up37pU	. 0 -	µg L	<. 0 -	. 07TU µg L	1. T	2T0	1UT
EP7T1S: 2:7 Fluorotelomer sulfonic acid Y2:7 F6S/	7321- p- 3p7	. 0 -	µg L	<. 0 -	. 07TV µg L	1. U	2U0	1U.
EP7T1S: V:7 Fluorotelomer sulfonic acid YV:7 F6S/	T- 1. VpTUpU	. 0 -	µg L	<. 0 -	. 07U µg L	11-	230	1TV

Subp Matri) : **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5840330) - continued								
EP7T1S: 1. :7 Fluorotelomer sulfonic acid Y1. :7 F6S/	17. 772p2. p	. 0 -	µg L	<. 0 -	. 0TU7 µg L	3302	3. 0	1T.
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5840750)								
EP7T1S: U:7 Fluorotelomer sulfonic acid YU:7 F6S/	3- 317Up87pU	. 0 -	µg L	<. 0 -	. 0TU µg L	- - 0	2T0	1UT
EP7T1S: 2:7 Fluorotelomer sulfonic acid Y2:7 F6S/	7321- p- 3p7	. 0 -	µg L	<. 0 -	. 0TV µg L	1. U	2U0	1U.
EP7T1S: V:7 Fluorotelomer sulfonic acid YV:7 F6S/	T- 1. VpTUpU	. 0 -	µg L	<. 0 -	. 0TU µg L	- 10	230	1TV
EP7T1S: 1. :7 Fluorotelomer sulfonic acid Y1. :7 F6S/	17. 772p2. p	. 0 -	µg L	<. 0 -	. 0TU7 µg L	V- 0-	3. 0	1T.
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5841732)								
EP7T1S: U:7 Fluorotelomer sulfonic acid YU:7 F6S/	3- 317Up87pU	. 0 -	µg L	<. 0 -	. 0TU µg L	- - 07	2T0	1UT
EP7T1S: 2:7 Fluorotelomer sulfonic acid Y2:7 F6S/	7321- p- 3p7	. 0 -	µg L	<. 0 -	. 0TV µg L	- U03	2U0	1U.
EP7T1S: V:7 Fluorotelomer sulfonic acid YV:7 F6S/	T- 1. VpTUpU	. 0 -	µg L	<. 0 -	. 07U µg L	11.	230	1TV
EP7T1S: 1. :7 Fluorotelomer sulfonic acid Y1. :7 F6S/	17. 772p2. p	. 0 -	µg L	<. 0 -	. 0TU7 µg L	11-	3. 0	1T.
EP231P: PFAS Sums (QCLot: 5840330)								
EP7T1S: Sum of PFAS	ppp	. 0 1	µg L	<. 0 1	ppp	ppp	ppp	ppp
EP7T1S: Sum of PF;)S and PFOS	T- - pU2pU_13 2Tp7Tp1	. 0 1	µg L	<. 0 1	ppp	ppp	ppp	ppp
EP7T1S: Sum of PFAS YB A DEH List/	ppp	. 0 1	µg L	<. 0 1	ppp	ppp	ppp	ppp
EP231P: PFAS Sums (QCLot: 5840750)								
EP7T1S: Sum of PFAS	ppp	. 0 1	µg L	<. 0 1	ppp	ppp	ppp	ppp
EP7T1S: Sum of PF;)S and PFOS	T- - pU2pU_13 2Tp7Tp1	. 0 1	µg L	<. 0 1	ppp	ppp	ppp	ppp
EP7T1S: Sum of PFAS YB A DEH List/	ppp	. 0 1	µg L	<. 0 1	ppp	ppp	ppp	ppp
EP231P: PFAS Sums (QCLot: 5841732)								
EP7T1S: Sum of PFAS	ppp	. 0 1	µg L	<. 0 1	ppp	ppp	ppp	ppp
EP7T1S: Sum of PF;)S and PFOS	T- - pU2pU_13 2Tp7Tp1	. 0 1	µg L	<. 0 1	ppp	ppp	ppp	ppp
EP7T1S: Sum of PFAS YB A DEH List/	ppp	. 0 1	µg L	<. 0 1	ppp	ppp	ppp	ppp

Matrix Spike (MS) Report

64e zuality control term Matri) Spike YMS/ refers to an intralaboratory split sample spiked (it4 a representative set of target analytes0 64e purpose of t4is 9C parameter is to monitor potential matri) effects on analyte recoveries0Static Hecovery Limits as per laboratory Data 9 uality Ob5ectives YD9 Os/0Ideal recovery ranges stated may be (aived in t4e event of sample matri) interference0

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2409333**	Page	: 1 of L
I ireEy	: **STANTEC AUSTRALIA PTY LTD**	bat orayorC	: vEmmoED eEyai s mmMoE c eit ourEe
I oEyaAy	: [redacted]	TeiehhoEe	[redacted]
ProjeAy	: s v V19008 _304300114	s aye I aDhieMF eAeme2	: 04_RuE_d0d4
I ne	: s v V19008- F AAV WniaD Mbaneryo E	0MMue s aye	: 11_RuE_d0d4
I aDhier	: [redacted]	po. of MaDhieMreAeme2	: dd
Nr2er EuDt er	: ___	po. of MaDhieMaEaiCMe2	: dd

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.

. mef Deyho2 MuDDarmeMaE2 refereEAeMare aiMo hromm2e2 yo aMMMynE yraAeat mnyC

Summary of Outliers

Outliers : Quality Control Samples

ThnMrehoryhrnghirnghyMouyrnerMfiagge2 nEyhe 7 uainyCI oEyroi B7 I QFehory

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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

Outliers : Frequency of Quality Control Samples

c aynx: **WATER**

7 uainyCI oEyroi I aDhie TOne		I ouEy		Faye B%Q		7 uainyCI oEyroi I heArfnAayroE
AEaiOynAai c eyho2M	c eyho2	7 I	Feguiar	AAyuai	v xheAye2	
bat orayorCs uhirAayeMBs) PQ						
Per_aE2 PoiCfiuoroai(CI I ut MyaEAeMBPVAI QtCbI c I c I	v Pd31S	0	34	0.00	10.00	p v Pc d013 . 3 & AbI 7 I I yaE2ar2
c aynx I hr(eMBc I Q						
Per_aE2 PoiCfiuoroai(CI I ut MyaEAeMBPVAI QtCbI c I c I	v Pd31S	0	34	0.00	5.00	p v Pc d013 . 3 & AbI 7 I I yaE2ar2

Analysis Holding Time Compliance

(f MaDhieMare r2eEyfre2 t eiow aMhamEg t eeE aEaiCMe2 or exyraAye2 ouyM2e of reAoDDeE2e2 hoi2rEg yDeM yhrMMhoui2 t e ya(eE rEyo AoEM2erayroE wheE rEyerhreyrEg reMuiyM

ThrM rehory MuDDarrzeM exyraAyroE / hreharayroE aE2 aEaiCMM yDeM aE2 AoDhareM eaAh wryh AbI reAoDDeE2e2 hoi2rEg yDeM BrefereEArEg) I v PA I W 84L- APHA- AI aE2 p v Pc Q t aMe2 oE yhe MaDhie AoEyarEer hrom2e2. s ayeMrrehorye2 rehreMeEyfrrMy2aye of exyraAyroE or aEaiCMMaE2 hreAiu2e Mut MequeEy2riuyroEMaE2 reruEM A irMyrEg of t reaAheMBfi aECQMhrom2e2 hererE.

Hoi2rEg yDe for ieaAhaye Deyho2M Be.g. TI bPQ marC aAAor2rEg yo yhe aEaiCyeM rehorye2. AMeMMDeEy AoDhareM yhe ieaAh 2aye wryh yhe MhoryeMy aEaiCye hoi2rEg yDe for yhe equrraieEy Mori Deyho2. TheMe are: orgaErAv 14 2aCM DerAurCd8 2aCM& oyher DeyaiM180 2aCM A reAor2e2 t reaAh 2oeMEoyguaraEyee a t reaAh for aii EoE_roiayhe haraDeyerM

Hoi2rEg yDeM for ***VOC in soils*** marC aAAor2rEg yo aEaiCyeM of rEyereMy. VrECI I hiorr2e aE2 I yCreEe hoi2rEg yDe rM 7 2aCM, oyherM 14 2aCM A reAor2e2 t reaAh 2oeM Eoy guaraEyee a t reaAh for aii VNI aEaiCyeM aE2 Mhoui2 t e rrerrfre2 rE AaMe yhe rehorye2 t reaAh rMa faiMe hoMyrrre or VrECI I hiorr2e aE2 I yCreEe are Eoy(eCaEaiCyeMof rEyereMy/AoEAerE.

c aynx: **WATER**

vrraiuayroE: × = Hoi2rEg yDe t reaAh ; ✓ = WryhrE hoi2rEg yDe.

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)								
0445_c W41d_d40530-	0445_c W411_d40530-	**30-May-2024**	**06-Jun-2024**	dL_p omd0d4	✓	**06-Jun-2024**	dL_p omd0d4	✓
0445_c W413_d40530-	0445_c W415_d40530-							
0445_7 I 100_d40530-	0445_7 I 300_d40530							
HDPE (no PTFE) (EP231X)								
0445_c W303_d40531-	0445_c W305_d40531-	**31-May-2024**	**06-Jun-2024**	d7_p omd0d4	✓	**06-Jun-2024**	d7_p omd0d4	✓
0445_I W310_d40531-	0445_I W311_d40531-							
0445_I W31L_d40531-	0445_I W3d1_d40531-							
0445_I W3dd_d40531-	0445_I W3d3_d40531-							
0445_I W333_d40531-	0445_I W33d_d40531-							
0445_I W340_d40531-	0445_I W4Ld_d40531-							
0445_7 I 101_d40531-	0445_7 I 10d_d40531-							
0445_7 I 301_d40531-	0445_7 I 500_d40531							

c ayrx: **WATER**

v maiuayvoE: × = Hoi2rEg yD e t reaAh ; ✓ = WryhrE hoi2rEg yDe.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X)								
0445_c W41d_d40530-	0445_c W411_d40530-	**30-May-2024**	**06-Jun-2024**	dL_p omd0d4	✓	**06-Jun-2024**	dL_p omd0d4	✓
0445_c W413_d40530-	0445_c W415_d40530-							
0445_7 I 100_d40530-	0445_7 I 300_d40530							
HDPE (no PTFE) (EP231X)								
0445_c W303_d40531-	0445_c W305_d40531-	**31-May-2024**	**06-Jun-2024**	d7_p omd0d4	✓	**06-Jun-2024**	d7_p omd0d4	✓
0445_I W310_d40531-	0445_I W311_d40531-							
0445_I W31L_d40531-	0445_I W3d1_d40531-							
0445_I W3dd_d40531-	0445_I W3d3_d40531-							
0445_I W333_d40531-	0445_I W33d_d40531-							
0445_I W340_d40531-	0445_I W4Ld_d40531-							
0445_7 I 101_d40531-	0445_7 I 10d_d40531-							
0445_7 I 301_d40531-	0445_7 I 500_d40531							
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X)								
0445_c W41d_d40530-	0445_c W411_d40530-	**30-May-2024**	**06-Jun-2024**	dL_p omd0d4	✓	**06-Jun-2024**	dL_p omd0d4	✓
0445_c W413_d40530-	0445_c W415_d40530-							
0445_7 I 100_d40530-	0445_7 I 300_d40530							
HDPE (no PTFE) (EP231X)								
0445_c W303_d40531-	0445_c W305_d40531-	**31-May-2024**	**06-Jun-2024**	d7_p omd0d4	✓	**06-Jun-2024**	d7_p omd0d4	✓
0445_I W310_d40531-	0445_I W311_d40531-							
0445_I W31L_d40531-	0445_I W3d1_d40531-							
0445_I W3dd_d40531-	0445_I W3d3_d40531-							
0445_I W333_d40531-	0445_I W33d_d40531-							
0445_I W340_d40531-	0445_I W4Ld_d40531-							
0445_7 I 101_d40531-	0445_7 I 10d_d40531-							
0445_7 I 301_d40531-	0445_7 I 500_d40531							
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
0445_c W41d_d40530-	0445_c W411_d40530-	**30-May-2024**	**06-Jun-2024**	dL_p omd0d4	✓	**06-Jun-2024**	dL_p omd0d4	✓
0445_c W413_d40530-	0445_c W415_d40530-							
0445_7 I 100_d40530-	0445_7 I 300_d40530							
HDPE (no PTFE) (EP231X)								
0445_c W303_d40531-	0445_c W305_d40531-	**31-May-2024**	**06-Jun-2024**	d7_p omd0d4	✓	**06-Jun-2024**	d7_p omd0d4	✓
0445_I W310_d40531-	0445_I W311_d40531-							
0445_I W31L_d40531-	0445_I W3d1_d40531-							
0445_I W3dd_d40531-	0445_I W3d3_d40531-							
0445_I W333_d40531-	0445_I W33d_d40531-							
0445_I W340_d40531-	0445_I W4Ld_d40531-							
0445_7 I 101_d40531-	0445_7 I 10d_d40531-							
0445_7 I 301_d40531-	0445_7 I 500_d40531							

c ayrnx: **WATER**

v maiuayvoE: × = Hoi2nEg yD e t reaAh ; ✓ = WnyhnE hoi2nEg yDe.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X)								
0445_c W41d_d40530-	0445_c W411_d40530-	**30-May-2024**	**06-Jun-2024**	dL_p omd0d4	✓	**06-Jun-2024**	dL_p omd0d4	✓
0445_c W413_d40530-	0445_c W415_d40530-							
0445_7 I 100_d40530-	0445_7 I 300_d40530							
HDPE (no PTFE) (EP231X)								
0445_c W303_d40531-	0445_c W305_d40531-	**31-May-2024**	**06-Jun-2024**	d7_p omd0d4	✓	**06-Jun-2024**	d7_p omd0d4	✓
0445_I W310_d40531-	0445_I W311_d40531-							
0445_I W31L_d40531-	0445_I W3d1_d40531-							
0445_I W3dd_d40531-	0445_I W3d3_d40531-							
0445_I W333_d40531-	0445_I W33d_d40531-							
0445_I W340_d40531-	0445_I W4Ld_d40531-							
0445_7 I 101_d40531-	0445_7 I 10d_d40531-							
0445_7 I 301_d40531-	0445_7 I 500_d40531							

Quality Control Parameter Frequency Compliance

The foiiowrEg rehoryMuDD arrMeMyhe frequeEACof iat orayorC7 I MaDhieMaEaiCve2 wryhrnEyhe aEaiCyrAai ioyBVQrE whrnAh yhe Mut Dnye2 MaDhieBVQwaMBwereQhroAeMve2. AAyuai raye Mhoui2 t e greayer yhaE or equai yo yhe exheAye2 raye. A irMyrEg of t reaAheMrMhrom2e2 rE yhe I uDDarCof NuyirerM

c ayrnx: **WATER**

vmaiuayroE: × = 7 uainyCI oEyroi frequeEACEoywryhrnE MheAnfrAayroE; ✓ = 7 uainyCI oEyroi frequeEACwryhrnE MheAnfrAayroE.

7 uainyCI oEyroi I aDhie TOne		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Reaular*	***Actual***	***Expected***	*Evaluation*	
bat orayorCs uhirAayeMBs) PQ							
Per_aE2 PoiCfiuoroai(CI I ut MyaEAeMBPVAI QtCbI c I c I	vPd31S	0	34	**0.00**	**10.00**	×	pvPc d013 . 3 & AbI 7 I I yaE2ar2
bat orayorCI oEyroi I aDhieMBbI I Q							
Per_aE2 PoiCfiuoroai(CI I ut MyaEAeMBPVAI QtCbI c I c I	vPd31S	3	34	**8.82**	**5.00**	✓	pvPc d013 . 3 & AbI 7 I I yaE2ar2
c eyho2 . iaE(MBc . Q							
Per_aE2 PoiCfiuoroai(CI I ut MyaEAeMBPVAI QtCbI c I c I	vPd31S	3	34	**8.82**	**5.00**	✓	pvPc d013 . 3 & AbI 7 I I yaE2ar2
c aynx I hr(eMBc I Q							
Per_aE2 PoiCfiuoroai(CI I ut MyaEAeMBPVAI QtCbI c I c I	vPd31S	0	34	**0.00**	**5.00**	×	pvPc d013 . 3 & AbI 7 I I yaE2ar2

Brief Method Summaries

The aEaiOyrAai hroAe2ureMuMe2 t Cyhe v EmmroED eEyai s mmMoE hame t eeE 2emeiohe2 froD eMyat inMhe2 nEyerEayroEaiiCreAogEnze2 hroAe2ureMMuAh aMyhoMe hut inMhe2 t Cyhe) I v PA- APHA- AI aE2 p v Pc . OE houMe 2emeiohe2 hroAe2ureMare eDhioOe2 nE yhe at MeEAe of 2oAuDeEye2 MyaE2ar2Mor t CAineEyrequeMy. The foiiowmEg rehoryhromO2eMt rref 2eMArnhyroEMof yhe aEaiOyrAai hroAe2ureMeDhioOe2 for reMuiyMrehorye2 nE yhe I eryrnAaye of AEaiOMM I ourAeMfroD whrnAh AbI Deyho2Mhame t eeE 2emeiohe2 are hromO2e2 wnyhnE yhe c eyho2 s eMArnhyroEM

Analytical Methods	Method	Matrix	Method Descriptions
Per_aE2 PoiOfiuoroai(Cl I ut MyaEAeM BPVAI OtCbI c I c I	vPd31S	WATv F	OE houMe: AEaiOMMof freMh aE2 MainEe wayerMt CI oin2 PhaMe v xyraAyroE Bi Pv Qfoiiowe2 t C bI _vieAyroMhraC_c I _c I - pegaymre c o2e uMEg c F c aE2 nEyerEai MyaE2ar2 quaEynyroE. OMoyohrAaiiCiat eiie2 aEaiogueMof yargeyaEaiOyeMuMe2 aMnEyerEai MyaE2ar2MaE2 Murrogaye Mare a22e2 yo yhe MaDhie AoEyanEer. The eEyme AoEyeEyMare yraEMerre2 yo a Mbin2 hhaMe exyraAyroE Bi Pv QAaryn2ge. The MaDhie AoEyanEer nMMuAAeMMmeiCrnEMe2 wnyh aimquoyMof yhe eiuyroE MbimeEy. The eiuye2 exyraAynMAoDt nEe2 wnyh aE equai mbiuDe of reageEy wayer aE2 a horyroE nMfniyere2 for aEaiOMM c eyho2 hroAe2ureMaE2 2aya quainyCot jeAymreM AoEforD yo) I s os 7 I c 5.4- yat ie . _15 requrreDeEyM

Preparation Methods	Method	Matrix	Method Descriptions
I oin2 PhaMe v xyraAyroE Bi Pv Qfor PVAI nE wayer	NFG7d	WATv F	OE houMe: OMoyohrAaiiCiat eiie2 aEaiogueMof yargeyaEaiOyeMuMe2 aMnEyerEai MyaE2ar2MaE2 Murrogaye Mare a22e2 yo yhe MaDhie AoEyanEer. The eEyme AoEyeEyMare yraEMerre2 yo a Mbin2 hhaMe exyraAyroE Bi Pv QAaryn2ge. The MaDhie AoEyanEer nMMuAAeMMmeiCrnEMe2 wnyh aimquoyMof yhe eiuyroE MbimeEy. The eiuye2 exyraAynMAoDt nEe2 wnyh aE equai mbiuDe of reageEy wayer aE2 a horyroE nMfniyere2 for aEaiOMM c eyho2 hroAe2ureMAoEforD yo) I s os 7 I c 5.3- yat ie . _15 requrreDeEyM

CERTIFICATE OF ANALYSIS

Work Order	: **EM2409333**	Page	: 1 of 13
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: [redacted]	Contact	: [redacted]
Address	: Level V28F00 Rourke St MELROHRNE 3000	Address	: [redacted]
Telep4one	: ppp	Telep4one	: [redacted]
Pro-ect	: DE51-002 p304300114	Date Samples Received	: 04pJunpV0V4 11:hh
Order number	: ppp	Date Analysis Commenced	: 0hpJunpV0V4
CpOpC number	: ppp	Issue Date	: 11pJunpV0V4 1F:11
Sampler	: [redacted]		
Site	: DE51-0028RAA5 B illiams Laverton		
9 uote number	: Sj _13-_1- QLaverton		
No. of samples received	: W		
No. of samples analysed	: W		

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

T4is report supersedes any previous reportYs/ (it4 t4is reference. Results apply to t4e sampleYs/ as submitted8 unless t4e sampling (as conducted by ALS. T4is document s4all not be reproduced8e) cept in full.

T4is Certificate of Analysis contains t4e follo(ing 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

T4is document 4as been electronically signed by t4e aut4oriwed signatories belo(. Electronic signing is carried out in compliance (it4 procedures specified in V1 C5R Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Senior Organic C4emist	Melbourne Organics8Springvale8, IC

General Comments

T4e analytical procedures used by ALS 4ave been developed from establis4ed internationally recognised procedures suc4 as t4ose publis4ed by t4e HSEPA8 APx A8 AS and NEPM. In 4ouse developed procedures are fully validated and are often at t4e client rezuest.

B 4ere moisture determination 4as been performed8results are reported on a dry (eig4t basis.

B 4ere a reported less t4an Y</ result is 4ig4er t4an t4e LOR8t4is may be due to primary sample e) tract_digestate dilution and_or insufficient sample for analysis.

B 4ere t4e LOR of a reported result differs from standard LOR8t4is may be due to 4ig4 moisture content8insufficient sample Yreduced (eig4t employed/ or matri) interference.

B 4en sampling time information is not provided by t4e client8sampling dates are s4o(n (it4out a time component. In t4ese instances8t4e time component 4as been assumed by t4e laboratory for processing purposes.

B 4ere a result is rezuired to meet compliance limits t4e associated uncertainty must be considered. Refer to t4e ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by C4emical Abstracts Services. T4e C4emical Abstracts Service is a division of t4e American C4emical Society.
LOR = Limit of reporting
^ = T4is result is computed from individual analyte detections at or above t4e level of reporting
ø = ALS is not NATA accredited for t4ese tests.
~ = Indicates an estimated value.

- EPV31X pPerpand Polyfluoroalkyl Substances YP5AS/: Samples received in V0mL or 1VhmL bottles 4ave been tested in accordance (it4 t4e 9 SMh.4 compliant8NATA accredited met4od. F0mL or Vh0mL bottles 4ave been tested to t4e legacy 9 SM h.1 aligned8NATA accredited met4od.
- EPV31: Stable isotope enric4ed internal standards are added to samples prior to e) traction. Target compounds 4ave a direct analogous internal standard (it4 t4e e) ception of P5PeS8P5x pA8P5DS8P5TrDA and 10:V 5TS. T4ese compounds use an internal standard t4at is c4emically related and 4as a retention time close to t4at of t4e target compound. T4e D9 O for internal standard response is h0p1h0% of t4at establis4ed at initial calibration or as per tables in HSEPA 1F33 (4ere listed. P5OS is zuantified using a certified8traceable standard consisting of linear and branc4ed P5OS isomers. T4ese practices are in line (it4 recommendations in t4e National Environmental Management Plan for P5AS and also conform to 9 SM h.4 YHS DoD/ rezuirements.

Analytical Results

SubpMatri) : WATER (Matri) : WATER)			Sample ID	0445_MW412_240530	0445_MW411_240530	0445_MW413_240530	0445_MW415_240530	0445_MW303_240531
			Sampling date / time	30pMaypV0V4 00:00	30pMaypV0V4 00:00	30pMaypV0V4 00:00	30pMaypV0V4 00:00	31pMaypV0V4 00:00
Compound	CAS Number	LOR	Unit	EM2409333-001	EM2409333-002	EM2409333-003	EM2409333-004	EM2409333-005
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	36hp63ph	0.0V	µg L	**0.13**	<0.0V	**0.06**	**0.84**	<0.0V
Perfluoropentane sulfonic acid (PFPeS)	V60Fp- 1p4	0.0V	µg L	**0.11**	<0.0V	**0.03**	**0.70**	<0.0V
Perfluorohexane sulfonic acid (PFHxS)	3hhp4Fp4	0.01	µg L	**1.01**	**0.07**	**0.39**	**5.15**	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	36hp- Vp2	0.0V	µg L	**0.07**	<0.0V	**0.02**	**0.28**	<0.0V
Perfluorooctane sulfonic acid (PFOS)	16F3pV3p1	0.01	µg L	**1.98**	**0.08**	**0.43**	**3.22**	<0.01
Perfluorononane sulfonic acid (PFNS)	F2Vh- p1Vp1	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorodecane sulfonic acid (PFDS)	33hp66p3	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluoropropane sulfonic acid (PFPrS)	4V3p41pF	0.0V	µg L	**0.04**	<0.0V	**0.02**	**0.33**	<0.0V
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	36hpVVp4	0.1	µg L	<0.1	<0.1	<0.1	**0.1**	<0.1
Perfluoropentanoic acid (PFPeA)	V60Fp- 0p3	0.0V	µg L	**0.03**	<0.0V	<0.0V	**0.30**	<0.0V
Perfluorohexanoic acid (PFHxA)	306pV4p4	0.0V	µg L	**0.16**	<0.0V	**0.04**	**1.22**	<0.0V
Perfluoroheptanoic acid (PFHpA)	36hp2hp-	0.0V	µg L	**0.03**	<0.0V	<0.0V	**0.23**	<0.0V
Perfluorooctanoic acid (PFOA)	33hpF6p1	0.01	µg L	**0.07**	<0.01	**0.02**	**0.37**	<0.01
Perfluorononanoic acid (PFNA)	36hp- hp1	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorodecanoic acid (PFDA)	33hp6FpV	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluoroundecanoic acid (PFUnDA)	V0h2p- 4p2	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorododecanoic acid (PFDoDA)	306phhp1	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorotridecanoic acid (PFTrDA)	6VFV- p- 4p2	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorotetradecanoic acid (PFTeDA)	36Fp0Fp6	0.0h	µg L	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
EP231C: Perfluoroalkyl Sulfonamides								

Analytical Results

SubpMatri) : WATER (Matri) : WATER)			Sample ID	0445_MW412_240530	0445_MW411_240530	0445_MW413_240530	0445_MW415_240530	0445_MW303_240531
			Sampling date / time	30pMaypV0V4 00:00	30pMaypV0V4 00:00	30pMaypV0V4 00:00	30pMaypV0V4 00:00	31pMaypV0V4 00:00
Compound	*CAS Number*	*LOR*	*Unit*	EM2409333-001	EM2409333-002	EM2409333-003	EM2409333-004	EM2409333-005
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	6h4p- 1pF	0.0V	µg L-	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31h0Fp3Vp2	0.0h	µg L-	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	41h1ph0pV	0.0h	µg L-	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	V4442p0- p6	0.0h	µg L-	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1F- 1p- - pV	0.0h	µg L-	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	V3hhp31p-	0.0V	µg L-	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	V- - 1ph0pF	0.0V	µg L-	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6h61V4p6Vp4	0.0h	µg L-	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	V6F1- p- 6pV	0.0h	µg L-	<0.0h	<0.0h	<0.0h	**0.08**	<0.0h
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	3- 102p34p4	0.0h	µg L-	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	1V0VVFpF0p0	0.0h	µg L-	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
EP231P: PFAS Sums								
Sum of PFAS	ppp	0.01	µg L-	**3.63**	**0.15**	**1.01**	**12.9**	<0.01
Sum of PFHxS and PFOS	3hhp4Fp4_16F3pV3p1	0.01	µg L-	**2.99**	**0.15**	**0.82**	**8.37**	<0.01
Sum of PFAS (WA DER List)	ppp	0.01	µg L-	**3.41**	**0.15**	**0.94**	**11.4**	<0.01
EP231S: PFAS Surrogate								
13C4-PFOS	ppp	0.0V	%	**94.1**	**103**	**105**	**103**	**105**
13C8-PFOA	ppp	0.0V	%	**108**	**114**	**108**	**109**	**110**

Analytical Results

SubpMatri) : WATER (Matri) : WATER)			Sample ID	0445_MW305_240531	0445_SW310_240531	0445_SW311_240531	0445_SW316_240531	0445_SW321_240531
			Sampling date / time	31pMaypV0V4 00:00	31pMaypV0V4 00:00	31pMaypV0V4 00:00	31pMaypV0V4 00:00	31pMaypV0V4 00:00
Compound	CAS Number	LOR	Unit	EM2409333-006	EM2409333-007	EM2409333-008	EM2409333-009	EM2409333-010
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	36hp63ph	0.0V	µg L	<0.0V	<0.0V	<0.0V	**0.03**	**0.04**
Perfluoropentane sulfonic acid (PFPeS)	V60Fp- 1p4	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	**0.03**
Perfluorohexane sulfonic acid (PFHxS)	3hhp4Fp4	0.01	µg L	<0.01	**0.06**	**0.06**	**0.05**	**0.42**
Perfluoroheptane sulfonic acid (PFHpS)	36hp- Vp2	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorooctane sulfonic acid (PFOS)	16F3pV3p1	0.01	µg L	**0.02**	**0.07**	**0.30**	**0.13**	**1.33**
Perfluorononane sulfonic acid (PFNS)	F2Vh- p1Vp1	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorodecane sulfonic acid (PFDS)	33hp66p3	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluoropropane sulfonic acid (PFPrS)	4V3p41pF	0.0V	µg L	<0.0V	<0.0V	**0.02**	<0.0V	<0.0V
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	36hpVVp4	0.1	µg L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	V60Fp- 0p3	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	**0.02**
Perfluorohexanoic acid (PFHxA)	306pV4p4	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	**0.07**
Perfluoroheptanoic acid (PFHpA)	36hp2hp-	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorooctanoic acid (PFOA)	33hpF6p1	0.01	µg L	<0.01	<0.01	<0.01	<0.01	**0.02**
Perfluorononanoic acid (PFNA)	36hp- hp1	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorodecanoic acid (PFDA)	33hp6FpV	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluoroundecanoic acid (PFUnDA)	V0h2p- 4p2	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorododecanoic acid (PFDoDA)	306phhp1	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorotridecanoic acid (PFTrDA)	6VFV- p- 4p2	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorotetradecanoic acid (PFTeDA)	36Fp0Fp6	0.0h	µg L	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
EP231C: Perfluoroalkyl Sulfonamides								

Analytical Results

SubpMatri) : WATER (Matri) : WATER)				Sample ID	0445_MW305_240531	0445_SW310_240531	0445_SW311_240531	0445_SW316_240531	0445_SW321_240531
				Sampling date / time	31pMaypV0V4 00:00	31pMaypV0V4 00:00	31pMaypV0V4 00:00	31pMaypV0V4 00:00	31pMaypV0V4 00:00
Compound	CAS Number	LOR	Unit		EM2409333-006	EM2409333-007	EM2409333-008	EM2409333-009	EM2409333-010
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	6h4p- 1pF	0.0V	µg L-		<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31h0Fp3Vp2	0.0h	µg L-		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	41h1ph0pV	0.0h	µg L-		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	V4442p0- p6	0.0h	µg L-		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1F- 1p- - pV	0.0h	µg L-		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	V3hhp31p-	0.0V	µg L-		<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	V- - 1ph0pF	0.0V	µg L-		<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6h61V4p6Vp4	0.0h	µg L-		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	V6F1- p- 6pV	0.0h	µg L-		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	3- 102p34p4	0.0h	µg L-		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	1V0VVFpF0p0	0.0h	µg L-		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
EP231P: PFAS Sums									
Sum of PFAS	ppp	0.01	µg L-		**0.02**	**0.13**	**0.38**	**0.21**	**1.93**
Sum of PFHxS and PFOS	3hhp4Fp4_16F3pV3p1	0.01	µg L-		**0.02**	**0.13**	**0.36**	**0.18**	**1.75**
Sum of PFAS (WA DER List)	ppp	0.01	µg L-		**0.02**	**0.13**	**0.36**	**0.21**	**1.90**
EP231S: PFAS Surrogate									
13C4-PFOS	ppp	0.0V	%		**111**	**102**	**104**	**104**	**110**
13C8-PFOA	ppp	0.0V	%		**124**	**116**	**115**	**111**	**116**

Analytical Results

SubpMatri) : WATER (Matri) : WATER)			Sample ID	0445_SW322_240531	0445_SW323_240531	0445_SW333_240531	0445_SW332_240531	0445_SW340_240531
			Sampling date / time	31pMaypV0V4 00:00	31pMaypV0V4 00:00	31pMaypV0V4 00:00	31pMaypV0V4 00:00	31pMaypV0V4 00:00
Compound	CAS Number	LOR	Unit	EM2409333-011	EM2409333-012	EM2409333-013	EM2409333-014	EM2409333-015
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	36hp63ph	0.0V	µg L	**0.04**	<0.0V	**0.04**	**0.14**	**0.06**
Perfluoropentane sulfonic acid (PFPeS)	V60Fp- 1p4	0.0V	µg L	**0.03**	<0.0V	<0.0V	**0.07**	**0.04**
Perfluorohexane sulfonic acid (PFHxS)	3hhp4Fp4	0.01	µg L	**0.36**	**0.09**	**0.12**	**0.41**	**0.46**
Perfluoroheptane sulfonic acid (PFHpS)	36hp- Vp2	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	**0.03**
Perfluorooctane sulfonic acid (PFOS)	16F3pV3p1	0.01	µg L	**1.00**	**0.26**	**0.18**	**0.53**	**1.84**
Perfluorononane sulfonic acid (PFNS)	F2Vh- p1Vp1	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorodecane sulfonic acid (PFDS)	33hp66p3	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluoropropane sulfonic acid (PFPrS)	4V3p41pF	0.0V	µg L	<0.0V	<0.0V	**0.02**	**0.10**	<0.0V
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	36hpVVp4	0.1	µg L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	V60Fp- 0p3	0.0V	µg L	**0.02**	**0.03**	**0.02**	**0.10**	**0.12**
Perfluorohexanoic acid (PFHxA)	306pV4p4	0.0V	µg L	**0.08**	**0.03**	**0.05**	**0.24**	**0.19**
Perfluoroheptanoic acid (PFHpA)	36hp2hp-	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	**0.13**
Perfluorooctanoic acid (PFOA)	33hpF6p1	0.01	µg L	**0.01**	<0.01	<0.01	**0.02**	**0.13**
Perfluorononanoic acid (PFNA)	36hp- hp1	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	**0.04**
Perfluorodecanoic acid (PFDA)	33hp6FpV	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	**0.03**
Perfluoroundecanoic acid (PFUnDA)	V0h2p- 4p2	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorododecanoic acid (PFDoDA)	306phhp1	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorotridecanoic acid (PFTrDA)	6VFV- p- 4p2	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorotetradecanoic acid (PFTeDA)	36Fp0Fp6	0.0h	µg L	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
EP231C: Perfluoroalkyl Sulfonamides								

Analytical Results

SubpMatri) : WATER (Matri) : WATER)				Sample ID	0445_SW322_240531	0445_SW323_240531	0445_SW333_240531	0445_SW332_240531	0445_SW340_240531
				Sampling date / time	31pMaypV0V4 00:00	31pMaypV0V4 00:00	31pMaypV0V4 00:00	31pMaypV0V4 00:00	31pMaypV0V4 00:00
Compound	*CAS Number*	*LOR*	*Unit*		EM2409333-011	EM2409333-012	EM2409333-013	EM2409333-014	EM2409333-015
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	6h4p-1pF	0.0V	µg L		<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31h0Fp3Vp2	0.0h	µg L		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	41h1ph0pV	0.0h	µg L		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	V4442p0-p6	0.0h	µg L		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1F-1p--pV	0.0h	µg L		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	V3hhp31p-	0.0V	µg L		<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	V--1ph0pF	0.0V	µg L		<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6h61V4p6Vp4	0.0h	µg L		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	V6F1-p-6pV	0.0h	µg L		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	3-102p34p4	0.0h	µg L		<0.0h	<0.0h	<0.0h	<0.0h	**0.06**
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	1V0VVFpF0p0	0.0h	µg L		<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
EP231P: PFAS Sums									
Sum of PFAS	ppp	0.01	µg L		**1.54**	**0.41**	**0.43**	**1.61**	**3.13**
Sum of PFHxS and PFOS	3hhp4Fp4_16F3pV3p1	0.01	µg L		**1.36**	**0.35**	**0.30**	**0.94**	**2.30**
Sum of PFAS (WA DER List)	ppp	0.01	µg L		**1.51**	**0.41**	**0.41**	**1.44**	**2.99**
EP231S: PFAS Surrogate									
13C4-PFOS	ppp	0.0V	%		**102**	**104**	**108**	**102**	**102**
13C8-PFOA	ppp	0.0V	%		**114**	**109**	**108**	**110**	**111**

Analytical Results

SubpMatri) : WATER (Matri) : WATER)			Sample ID	0445_SW462_240531	0445_QC100_240530	0445_QC101_240531	0445_QC102_240531	0445_QC300_240530
			Sampling date / time	31pMaypV0V4 00:00	30pMaypV0V4 00:00	31pMaypV0V4 00:00	31pMaypV0V4 00:00	30pMaypV0V4 00:00
Compound	CAS Number	LOR	Unit	EM2409333-016	EM2409333-017	EM2409333-018	EM2409333-019	EM2409333-023
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	36hp63ph	0.0V	µg L	<0.0V	<0.0V	**0.14**	**0.05**	<0.0V
Perfluoropentane sulfonic acid (PFPeS)	V60Fp- 1p4	0.0V	µg L	<0.0V	<0.0V	**0.07**	**0.04**	<0.0V
Perfluorohexane sulfonic acid (PFHxS)	3hhp4Fp4	0.01	µg L	<0.01	**0.10**	**0.43**	**0.46**	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	36hp- Vp2	0.0V	µg L	<0.0V	<0.0V	<0.0V	**0.03**	<0.0V
Perfluorooctane sulfonic acid (PFOS)	16F3pV3p1	0.01	µg L	**0.02**	**0.08**	**0.50**	**1.84**	<0.01
Perfluorononane sulfonic acid (PFNS)	F2Vh- p1Vp1	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorodecane sulfonic acid (PFDS)	33hp66p3	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluoropropane sulfonic acid (PFPrS)	4V3p41pF	0.0V	µg L	<0.0V	<0.0V	**0.10**	<0.0V	<0.0V
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	36hpVVp4	0.1	µg L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	V60Fp- 0p3	0.0V	µg L	<0.0V	<0.0V	**0.09**	**0.12**	<0.0V
Perfluorohexanoic acid (PFHxA)	306pV4p4	0.0V	µg L	<0.0V	<0.0V	**0.23**	**0.19**	<0.0V
Perfluoroheptanoic acid (PFHpA)	36hp2hp-	0.0V	µg L	<0.0V	<0.0V	<0.0V	**0.14**	<0.0V
Perfluorooctanoic acid (PFOA)	33hpF6p1	0.01	µg L	<0.01	<0.01	**0.02**	**0.14**	<0.01
Perfluorononanoic acid (PFNA)	36hp- hp1	0.0V	µg L	<0.0V	<0.0V	<0.0V	**0.04**	<0.0V
Perfluorodecanoic acid (PFDA)	33hp6FpV	0.0V	µg L	<0.0V	<0.0V	<0.0V	**0.04**	<0.0V
Perfluoroundecanoic acid (PFUnDA)	V0h2p- 4p2	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorododecanoic acid (PFDoDA)	306phhp1	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorotridecanoic acid (PFTrDA)	6VFV- p- 4p2	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
Perfluorotetradecanoic acid (PFTeDA)	36Fp0Fp6	0.0h	µg L	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
EP231C: Perfluoroalkyl Sulfonamides								

Analytical Results

SubpMatri) : WATER (Matri) : WATER)			Sample ID	0445_SW462_240531	0445_QC100_240530	0445_QC101_240531	0445_QC102_240531	0445_QC300_240530
			Sampling date / time	31pMaypV0V4 00:00	30pMaypV0V4 00:00	31pMaypV0V4 00:00	31pMaypV0V4 00:00	30pMaypV0V4 00:00
Compound	*CAS Number*	*LOR*	*Unit*	EM2409333-016	EM2409333-017	EM2409333-018	EM2409333-019	EM2409333-023
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	6h4p-1pF	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31h0Fp3Vp2	0.0h	µg L	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	41h1ph0pV	0.0h	µg L	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	V4442p0-p6	0.0h	µg L	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1F-1p--pV	0.0h	µg L	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	V3hhp31p-	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	V--1ph0pF	0.0V	µg L	<0.0V	<0.0V	<0.0V	<0.0V	<0.0V
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6h61V4p6Vp4	0.0h	µg L	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	V6F1-p-6pV	0.0h	µg L	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	3-102p34p4	0.0h	µg L	<0.0h	<0.0h	<0.0h	**0.06**	<0.0h
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	1V0VVFpF0p0	0.0h	µg L	<0.0h	<0.0h	<0.0h	<0.0h	<0.0h
EP231P: PFAS Sums								
Sum of PFAS	ppp	0.01	µg L	**0.02**	**0.18**	**1.58**	**3.15**	<0.01
Sum of PFHxS and PFOS	3hhp4Fp4_16F3pV3p1	0.01	µg L	**0.02**	**0.18**	**0.93**	**2.30**	<0.01
Sum of PFAS (WA DER List)	ppp	0.01	µg L	**0.02**	**0.18**	**1.41**	**3.00**	<0.01
EP231S: PFAS Surrogate								
13C4-PFOS	ppp	0.0V	%	**97.6**	**103**	**102**	**100**	**102**
13C8-PFOA	ppp	0.0V	%	**109**	**108**	**106**	**112**	**107**

Analytical Results

SubpMatri) : WATER (Matri) : WATER)			Sample ID	0445_QC301_240531	0445_QC500_240531	----	----	----
			Sampling date / time	31pMaypV0V4 00:00	31pMaypV0V4 00:00	ppp	ppp	ppp
Compound	CAS Number	LOR	Unit	EM2409333-024	EM2409333-025	--------	--------	--------
				Result	Result	ppp	ppp	ppp
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	36hp63ph	0.0V	µg L	<0.0V	<0.0V	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	V60Fp- 1p4	0.0V	µg L	<0.0V	<0.0V	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	3hhp4Fp4	0.01	µg L	<0.01	<0.01	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	36hp- Vp2	0.0V	µg L	<0.0V	<0.0V	----	----	----
Perfluorooctane sulfonic acid (PFOS)	16F3pV3p1	0.01	µg L	<0.01	<0.01	----	----	----
Perfluorononane sulfonic acid (PFNS)	F2Vh- p1Vp1	0.0V	µg L	<0.0V	<0.0V	----	----	----
Perfluorodecane sulfonic acid (PFDS)	33hp66p3	0.0V	µg L	<0.0V	<0.0V	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	4V3p41pF	0.0V	µg L	<0.0V	<0.0V	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	36hpVVp4	0.1	µg L	<0.1	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	V60Fp- 0p3	0.0V	µg L	<0.0V	<0.0V	----	----	----
Perfluorohexanoic acid (PFHxA)	306pV4p4	0.0V	µg L	<0.0V	<0.0V	----	----	----
Perfluoroheptanoic acid (PFHpA)	36hp2hp-	0.0V	µg L	<0.0V	<0.0V	----	----	----
Perfluorooctanoic acid (PFOA)	33hpF6p1	0.01	µg L	<0.01	<0.01	----	----	----
Perfluorononanoic acid (PFNA)	36hp- hp1	0.0V	µg L	<0.0V	<0.0V	----	----	----
Perfluorodecanoic acid (PFDA)	33hp6FpV	0.0V	µg L	<0.0V	<0.0V	----	----	----
Perfluoroundecanoic acid (PFUnDA)	V0h2p- 4p2	0.0V	µg L	<0.0V	<0.0V	----	----	----
Perfluorododecanoic acid (PFDoDA)	306phhp1	0.0V	µg L	<0.0V	<0.0V	----	----	----
Perfluorotridecanoic acid (PFTrDA)	6VFV- p- 4p2	0.0V	µg L	<0.0V	<0.0V	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	36Fp0Fp6	0.0h	µg L	<0.0h	<0.0h	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								

Analytical Results

SubpMatri) : WATER (Matri) : WATER)			Sample ID	0445_QC301_240531	0445_QC500_240531	----	----	----
			Sampling date / time	31pMaypV0V4 00:00	31pMaypV0V4 00:00	ppp	ppp	ppp
Compound	CAS Number	LOR	Unit	EM2409333-024	EM2409333-025	-------	-------	--------
				Result	Result	ppp	ppp	ppp
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	6h4p- 1pF	0.0V	µg L-	<0.0V	<0.0V	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31h0Fp3Vp2	0.0h	µg L-	<0.0h	<0.0h	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	41h1ph0pV	0.0h	µg L-	<0.0h	<0.0h	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	V4442p0- p6	0.0h	µg L-	<0.0h	<0.0h	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1F- 1p- - pV	0.0h	µg L-	<0.0h	<0.0h	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	V3hhp31p-	0.0V	µg L-	<0.0V	<0.0V	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	V- - 1ph0pF	0.0V	µg L-	<0.0V	<0.0V	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6h61V4p6Vp4	0.0h	µg L-	<0.0h	<0.0h	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	V6F1- p- 6pV	0.0h	µg L-	<0.0h	<0.0h	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	3- 102p34p4	0.0h	µg L-	<0.0h	<0.0h	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	1V0VVFpF0p0	0.0h	µg L-	<0.0h	<0.0h	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	ppp	0.01	µg L-	<0.01	<0.01	----	----	----
Sum of PFHxS and PFOS	3hhp4Fp4_16F3pV3p1	0.01	µg L-	<0.01	<0.01	----	----	----
Sum of PFAS (WA DER List)	ppp	0.01	µg L-	<0.01	<0.01	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	ppp	0.0V	%	**100**	**103**	----	----	----
13C8-PFOA	ppp	0.0V	%	**108**	**102**	----	----	----

Surrogate Control Limits

Sub(Matri) : WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	ppp	Fh	140
13C8-PFOA	ppp	61	133

Cardno — Stantec

DATE: 10/4/24
TIME: 16:55
COURIER: ✓
TEMPERATURE 6.1 AL
ATTEMP TO CHILL: YES NO

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Chain of Custody

Sheet 1 of 1

PM Name: [redacted]
Mobile: [redacted]
Address: Level 4, 501 Swanston St Melbourne, VIC 3000
PM Email: [redacted]
Project Number: 304300114/DEF19008 Site: Bandiana
Laboratory (name, phone,fax no & contact person) Eurofins

Sample ID	Laboratory ID	Container	Sampling Date	Sampling Time	Sample Matrix: Water	Sample preservation: Ice/Ice Bricks	Analysis: PFAS 28 Full Suite
0445_QC200_240402		2 x PFAS Bottles	2/04/2024		x	x	x
0445_QC201_240402		2 x PFAS Bottles	2/04/2024		x	x	x
0445_QC202_240402		2 x PFAS Bottles	2/04/2024		x	x	x
0445_QC203_240402		2 x PFAS Bottles	2/04/2024		x	x	x
0445_QC204_240403		2 x PFAS Bottles	3/04/2024		x	x	x
0445_QC205_240404		2 x PFAS Bottles	4/04/2024		x	x	x
0445_QC206_240404		2 x PFAS Bottles	4/04/2024		x	x	x
0445_QC207_240404		2 x PFAS Bottles	4/04/2024		x	x	x
0445_QC208_240404		2 x PFAS Bottles	4/04/2024		x	x	x
0445_QC209_240404		2 x PFAS Bottles	4/04/2024		x	x	x
0445_QC210_240404		2 x PFAS Bottles	4/04/2024		x	x	x
0445_QC503_240404		2 x PFAS Bottles	4/04/2024		x	x	x

10/4/24 @ 16:55 ✓

Sampler: I attest that the proper field sampling proceedures were used during the collection of these samples. Sampler name: (print and signature) [redacted] Date: 8/04/2024

Relinquished by (Sampler): (print and signature) [redacted] Date 8/04/2024 Time Received by (Courier/Lab): (print and signature) Date Time

Relinquished by: (print and signature) Date Time Received by: (print and signature) Date Time

Relinquished by: (print and signature) Date Time Received by: (print and signature) Date Time

Please supply results electronically in spreadsheet and ESDAT files.

Turn around time: (24 hour/48 hour/3 days/5 days) Please circle

[redacted]

Stantec Australia Pty Ltd
Level 22, 570 Bourke Street
Melbourne
VIC 3000

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: [redacted]

Report **1086312-S**
Project name BANDIANA
Project ID 304300114/DEF19008
Received Date Apr 10, 2024

Client Sample ID			0445_QC202_240402	0445_QC203_240402
Sample Matrix			Soil	Soil
Eurofins Sample No.			M24-Ap0025066	M24-Ap0025067
Date Sampled			Apr 02, 2024	Apr 02, 2024
Test/Reference	LOR	Unit		
Sample Properties				
% Moisture	1	%	27	21
Perfluoroalkyl carboxylic acids (PFCAs)				
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5
13C4-PFBA (surr.)	1	%	112	110
13C5-PFPeA (surr.)	1	%	122	120
13C5-PFHxA (surr.)	1	%	110	112
13C4-PFHpA (surr.)	1	%	113	112
13C8-PFOA (surr.)	1	%	115	110
13C5-PFNA (surr.)	1	%	121	115
13C6-PFDA (surr.)	1	%	104	102
13C2-PFUnDA (surr.)	1	%	83	85
13C2-PFDoDA (surr.)	1	%	119	118
13C2-PFTeDA (surr.)	1	%	150	123
Perfluoroalkyl sulfonamido substances				
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	5	ug/kg	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	5	ug/kg	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10

Client Sample ID			0445_QC202_240402	0445_QC203_240402
Sample Matrix			Soil	Soil
Eurofins Sample No.			M24-Ap0025066	M24-Ap0025067
Date Sampled			Apr 02, 2024	Apr 02, 2024
Test/Reference	LOR	Unit		
Perfluoroalkyl sulfonamido substances				
13C8-FOSA (surr.)	1	%	85	81
D3-N-MeFOSA (surr.)	1	%	123	120
D5-N-EtFOSA (surr.)	1	%	109	109
D7-N-MeFOSE (surr.)	1	%	112	121
D9-N-EtFOSE (surr.)	1	%	95	96
D5-N-EtFOSAA (surr.)	1	%	132	73
D3-N-MeFOSAA (surr.)	1	%	120	66
Perfluoroalkyl sulfonic acids (PFSAs)				
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	[N09]7.8	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5
13C3-PFBS (surr.)	1	%	91	96
18O2-PFHxS (surr.)	1	%	96	101
13C8-PFOS (surr.)	1	%	82	89
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	5	ug/kg	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	126	107
13C2-6:2 FTSA (surr.)	1	%	142	134
13C2-8:2 FTSA (surr.)	1	%	134	130
13C2-10:2 FTSA (surr.)	1	%	119	118
PFASs Summations				
Sum (PFHxS + PFOS)*	5	ug/kg	7.8	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	7.8	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	7.8	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
% Moisture	Melbourne	Apr 11, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Melbourne	Apr 15, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Apr 15, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Apr 15, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Apr 15, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Apr 11, 2024	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Stantec Australia Pty Ltd (VIC)
Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000

Project Name: BANDIANA
Project ID: 304300114/DEF19008

Order No.:
Report #: 1086312
Phone:
Fax:

Received: Apr 10, 2024 4:55 PM
Due: Apr 17, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	0445_QC200_240402	Apr 02, 2024		Water	M24-Ap0025064		X
2	0445_QC201_240402	Apr 02, 2024		Water	M24-Ap0025065		X
3	0445_QC202_240402	Apr 02, 2024		Soil	M24-Ap0025066	X	X
4	0445_QC203_240402	Apr 02, 2024		Soil	M24-Ap0025067	X	X
5	0445_QC204_240403	Apr 03, 2024		Water	M24-Ap0025068		X
6	0445_QC205_240404	Apr 04, 2024		Water	M24-Ap0025069		X
7	0445_QC206_240404	Apr 04, 2024		Water	M24-Ap0025070		X
8	0445_QC207_240404	Apr 04, 2024		Water	M24-Ap0025071		X

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Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Site# 2370

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Site# 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Stantec Australia Pty Ltd (VIC)
Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000

Project Name: BANDIANA
Project ID: 304300114/DEF19008

Order No.:
Report #: 1086312
Phone:
Fax:

Received: Apr 10, 2024 4:55 PM
Due: Apr 17, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X
9	0445_QC208_240404	Apr 04, 2024		Water	M24-Ap0025072		X
10	0445_QC209_240404	Apr 04, 2024		Water	M24-Ap0025073		X
11	0445_QC210_240404	Apr 04, 2024		Water	M24-Ap0025074		X
12	0445_QC503_240404	Apr 04, 2024		Water	M24-Ap0025075		X
Test Counts						2	12

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ppm: parts per million
µg/L: micrograms per litre
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit
Colour: Pt-Co Units (CU)

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/kg	< 5			5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5			5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5			5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5			5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5			5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5			5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5			5	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 5			5	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5			5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5			5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5			5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/kg	< 5			5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/kg	< 5			5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10			10	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 10			10	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5			5	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 5			5	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 5			5	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 5			5	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 5			5	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/kg	< 10			10	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5			5	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	78			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	92			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	94			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	88			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	89			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	90			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	73			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	77			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	73			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	84			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	78			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	79			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	80			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	82			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	76			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	83			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	89			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	78			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	83			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	77			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	83			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	76			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	75			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	97			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	75			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	92			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	74			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	75			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	77			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	106			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)	M24-Ap0035090	NCP	%	84			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M24-Ap0035090	NCP	%	99			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M24-Ap0035090	NCP	%	101			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-Ap0035090	NCP	%	94			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M24-Ap0035090	NCP	%	100			50-150	Pass	
Perfluorononanoic acid (PFNA)	M24-Ap0035090	NCP	%	98			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M24-Ap0035090	NCP	%	91			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-Ap0035090	NCP	%	88			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-Ap0035090	NCP	%	85			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-Ap0035090	NCP	%	99			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-Ap0035090	NCP	%	93			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M24-Ap0035090	NCP	%	90			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-Ap0031727	NCP	%	89			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-Ap0035090	NCP	%	69			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-Ap0031727	NCP	%	89			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-Ap0035090	NCP	%	94			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-Ap0035090	NCP	%	87			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-Ap0035090	NCP	%	98			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M24-Ap0035090	NCP	%	87			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-Ap0035090	NCP	%	71			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-Ap0035090	NCP	%	90			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-Ap0035090	NCP	%	71			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-Ap0035090	NCP	%	81			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-Ap0035090	NCP	%	99			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-Ap0035090	NCP	%	80			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-Ap0035090	NCP	%	73			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-Ap0035090	NCP	%	80			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-Ap0035090	NCP	%	83			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-Ap0035090	NCP	%	86			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-Ap0035090	NCP	%	104			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-Ap0025061	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-Ap0025061	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-Ap0025061	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-Ap0025061	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	M24-Ap0025067	CP	%	21	21	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N09	Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).

Authorised by:



Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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VIC 3000

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
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Attention: [redacted]

Report **1086312-W**
Project name BANDIANA
Project ID 304300114/DEF19008
Received Date Apr 10, 2024

Client Sample ID			0445_QC200_240402	0445_QC201_240402	0445_QC204_240403	0445_QC205_240404
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M24-Ap0025064**	**M24-Ap0025065**	**M24-Ap0025068**	**M24-Ap0025069**
Date Sampled			**Apr 02, 2024**	**Apr 02, 2024**	**Apr 03, 2024**	**Apr 04, 2024**
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	0.06	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.06	0.09	0.14	0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	0.05	0.11	0.14	0.05
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.01	[N09]0.04	[N09]0.07	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.02	[N09]0.06	[N09]0.07	[N09]0.02
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	[N09]0.02	[N09]0.02	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	100	60	90	104
13C5-PFPeA (surr.)	1	%	84	78	74	93
13C5-PFHxA (surr.)	1	%	98	93	88	99
13C4-PFHpA (surr.)	1	%	96	96	90	95
13C8-PFOA (surr.)	1	%	110	110	103	123
13C5-PFNA (surr.)	1	%	87	96	85	91
13C6-PFDA (surr.)	1	%	81	84	77	85
13C2-PFUnDA (surr.)	1	%	69	70	68	69
13C2-PFDoDA (surr.)	1	%	53	57	56	59
13C2-PFTeDA (surr.)	1	%	46	70	56	44
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	68	100	66	61
D3-N-MeFOSA (surr.)	1	%	34	99	26	52

Client Sample ID			0445_QC200_240402	0445_QC201_240402	0445_QC204_240403	0445_QC205_240404
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-Ap0025064	M24-Ap0025065	M24-Ap0025068	M24-Ap0025069
Date Sampled			Apr 02, 2024	Apr 02, 2024	Apr 03, 2024	Apr 04, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D5-N-EtFOSA (surr.)	1	%	44	95	28	63
D7-N-MeFOSE (surr.)	1	%	59	111	54	73
D9-N-EtFOSE (surr.)	1	%	71	120	68	94
D5-N-EtFOSAA (surr.)	1	%	59	63	59	63
D3-N-MeFOSAA (surr.)	1	%	71	75	66	78
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	[N09]0.04	[N09]0.05	[N09]0.06	[N09]0.03
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.05	0.03	0.03	0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.01	[N09]0.03	[N09]0.04	[N09]0.03
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.16	[N09]0.22	[N09]0.57	[N09]0.20
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	[N09]0.02	[N09]0.02	[N09]0.02
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.27	[N09]0.99	[N09]1.1	[N09]0.35
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	101	93	93	103
18O2-PFHxS (surr.)	1	%	98	101	97	97
13C8-PFOS (surr.)	1	%	86	83	76	88
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	106	105	95	68
13C2-6:2 FTSA (surr.)	1	%	98	116	100	68
13C2-8:2 FTSA (surr.)	1	%	75	91	77	78
13C2-10:2 FTSA (surr.)	1	%	56	64	59	56
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.43	1.21	1.67	0.55
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.29	1.05	1.17	0.37
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.45	1.27	1.74	0.57
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.61	1.56	2.21	0.66
Sum of PFASs (n=30)*	0.1	ug/L	0.67	1.66	2.32	0.72

Client Sample ID			0445_QC206_240404	0445_QC207_240404	0445_QC208_240404	0445_QC209_240404
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-Ap0025070	M24-Ap0025071	M24-Ap0025072	M24-Ap0025073
Date Sampled			Apr 04, 2024	Apr 04, 2024	Apr 04, 2024	Apr 04, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.02	< 0.01	0.06	0.03
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	0.02	< 0.01	0.24	0.13
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.01	< 0.01	0.03	[N09]0.06
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	0.08	[N09]0.12
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	94	95	101	98
13C5-PFPeA (surr.)	1	%	86	84	89	84
13C5-PFHxA (surr.)	1	%	97	89	91	90
13C4-PFHpA (surr.)	1	%	95	87	91	91
13C8-PFOA (surr.)	1	%	105	112	120	116
13C5-PFNA (surr.)	1	%	79	87	96	99
13C6-PFDA (surr.)	1	%	69	87	79	92
13C2-PFUnDA (surr.)	1	%	56	72	76	82
13C2-PFDoDA (surr.)	1	%	44	64	66	67
13C2-PFTeDA (surr.)	1	%	40	71	51	65
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	56	71	107	105
D3-N-MeFOSA (surr.)	1	%	43	45	168	197
D5-N-EtFOSA (surr.)	1	%	49	53	162	199
D7-N-MeFOSE (surr.)	1	%	69	62	181	164
D9-N-EtFOSE (surr.)	1	%	80	74	196	184
D5-N-EtFOSAA (surr.)	1	%	51	62	69	69
D3-N-MeFOSAA (surr.)	1	%	58	70	73	78
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	0.14	[N09]0.15
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	0.06	0.02
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	0.16	[N09]0.14
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	[N09]0.02	[N09]1.5	[N09]0.55
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	0.08	[N09]0.03
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	[N09]0.03	[N09]2.1	[N09]0.59
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			0445_QC206_240404	0445_QC207_240404	0445_QC208_240404	0445_QC209_240404
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-Ap0025070	M24-Ap0025071	M24-Ap0025072	M24-Ap0025073
Date Sampled			Apr 04, 2024	Apr 04, 2024	Apr 04, 2024	Apr 04, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
13C3-PFBS (surr.)	1	%	95	92	95	96
18O2-PFHxS (surr.)	1	%	93	90	64	97
13C8-PFOS (surr.)	1	%	76	83	66	90
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	103	62	63	67
13C2-6:2 FTSA (surr.)	1	%	94	61	66	89
13C2-8:2 FTSA (surr.)	1	%	61	76	74	83
13C2-10:2 FTSA (surr.)	1	%	41	61	57	65
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	0.05	3.6	1.14
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	0.03	2.18	0.71
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	0.05	3.68	1.26
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.05	0.05	4.15	1.63
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	4.45	1.82

Client Sample ID			0445_QC210_240404	0445_QC503_240404
Sample Matrix			Water	Water
Eurofins Sample No.			M24-Ap0025074	M24-Ap0025075
Date Sampled			Apr 04, 2024	Apr 04, 2024
Test/Reference	LOR	Unit		
Perfluoroalkyl carboxylic acids (PFCAs)				
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01
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	%	88	118
13C5-PFPeA (surr.)	1	%	78	98
13C5-PFHxA (surr.)	1	%	93	101
13C4-PFHpA (surr.)	1	%	91	102
13C8-PFOA (surr.)	1	%	104	125
13C5-PFNA (surr.)	1	%	83	101
13C6-PFDA (surr.)	1	%	72	93

Client Sample ID			0445_QC210_240404	0445_QC503_240404
Sample Matrix			Water	Water
Eurofins Sample No.			M24-Ap0025074	M24-Ap0025075
Date Sampled			Apr 04, 2024	Apr 04, 2024
Test/Reference	LOR	Unit		
Perfluoroalkyl carboxylic acids (PFCAs)				
13C2-PFUnDA (surr.)	1	%	41	64
13C2-PFDoDA (surr.)	1	%	35	57
13C2-PFTeDA (surr.)	1	%	26	66
Perfluoroalkyl sulfonamido substances				
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	66	84
D3-N-MeFOSA (surr.)	1	%	64	66
D5-N-EtFOSA (surr.)	1	%	64	77
D7-N-MeFOSE (surr.)	1	%	91	125
D9-N-EtFOSE (surr.)	1	%	96	137
D5-N-EtFOSAA (surr.)	1	%	56	83
D3-N-MeFOSAA (surr.)	1	%	46	63
Perfluoroalkyl sulfonic acids (PFSAs)				
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.02	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.07	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	94	102
18O2-PFHxS (surr.)	1	%	94	101
13C8-PFOS (surr.)	1	%	33	39
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	96	71
13C2-6:2 FTSA (surr.)	1	%	107	80
13C2-8:2 FTSA (surr.)	1	%	68	76
13C2-10:2 FTSA (surr.)	1	%	39	72

Client Sample ID			0445_QC210_240404	0445_QC503_240404
Sample Matrix			Water	Water
Eurofins Sample No.			M24-Ap0025074	M24-Ap0025075
Date Sampled			Apr 04, 2024	Apr 04, 2024
Test/Reference	LOR	Unit		
PFASs Summations				
Sum (PFHxS + PFOS)*	0.01	ug/L	0.09	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.07	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.09	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.09	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Melbourne	Apr 11, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Apr 11, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Apr 11, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Apr 11, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Apr 11, 2024	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Eurofins Environment Testing Australia Pty Ltd
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Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Site# 2554

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NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Stantec Australia Pty Ltd (VIC)
Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000

Project Name: BANDIANA
Project ID: 304300114/DEF19008

Order No.:
Report #: 1086312
Phone:
Fax:

Received: Apr 10, 2024 4:55 PM
Due: Apr 17, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	0445_QC200_240402	Apr 02, 2024		Water	M24-Ap0025064		X
2	0445_QC201_240402	Apr 02, 2024		Water	M24-Ap0025065		X
3	0445_QC202_240402	Apr 02, 2024		Soil	M24-Ap0025066	X	X
4	0445_QC203_240402	Apr 02, 2024		Soil	M24-Ap0025067	X	X
5	0445_QC204_240403	Apr 03, 2024		Water	M24-Ap0025068		X
6	0445_QC205_240404	Apr 04, 2024		Water	M24-Ap0025069		X
7	0445_QC206_240404	Apr 04, 2024		Water	M24-Ap0025070		X
8	0445_QC207_240404	Apr 04, 2024		Water	M24-Ap0025071		X

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Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd
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NATA# 2377
Site# 2370

Eurofins ProMicro Pty Ltd
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Perth ProMicro
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NATA# 2561
Site# 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Stantec Australia Pty Ltd (VIC)
Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000

Project Name: BANDIANA
Project ID: 304300114/DEF19008

Order No.:
Report #: 1086312
Phone:
Fax:

Received: Apr 10, 2024 4:55 PM
Due: Apr 17, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X
9	0445_QC208_240404	Apr 04, 2024		Water	M24-Ap0025072		X
10	0445_QC209_240404	Apr 04, 2024		Water	M24-Ap0025073		X
11	0445_QC210_240404	Apr 04, 2024		Water	M24-Ap0025074		X
12	0445_QC503_240404	Apr 04, 2024		Water	M24-Ap0025075		X
Test Counts						2	12

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ppm: parts per million
µg/L: micrograms per litre
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit
Colour: Pt-Co Units (CU)

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	97			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	116			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	109			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	110			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	113			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	115			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	89			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	93			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	96			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	69			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	89			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	93			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	91			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	91			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	84			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	88			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	107			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	114			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	100			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	88			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	112			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	92			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	86			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	97			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	92			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	69			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	94			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	84			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	87			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	85			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					
Perfluorotridecanoic acid (PFTrDA)	M24-Ap0019142	NCP	%	52			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorononanesulfonic acid (PFNS)	M24-Ap0019142	NCP	%	89			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-Ap0019142	NCP	%	111			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-Ap0027380	NCP	%	86			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	M24-Ap0025073	CP	%	90			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M24-Ap0025073	CP	%	108			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M24-Ap0025073	CP	%	111			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-Ap0025073	CP	%	102			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M24-Ap0025073	CP	%	106			50-150	Pass	
Perfluorononanoic acid (PFNA)	M24-Ap0025073	CP	%	107			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M24-Ap0025073	CP	%	85			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-Ap0025073	CP	%	88			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-Ap0025073	CP	%	88			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-Ap0025073	CP	%	89			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorooctane sulfonamide (FOSA)	M24-Ap0025073	CP	%	87			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-Ap0025073	CP	%	96			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-Ap0025073	CP	%	91			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-Ap0025073	CP	%	83			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-Ap0025073	CP	%	88			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-Ap0025073	CP	%	106			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-Ap0025073	CP	%	99			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M24-Ap0025073	CP	%	97			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-Ap0025073	CP	%	111			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-Ap0025073	CP	%	98			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-Ap0025073	CP	%	104			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-Ap0025073	CP	%	124			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-Ap0025073	CP	%	89			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-Ap0025073	CP	%	83			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-Ap0025073	CP	%	84			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-Ap0025073	CP	%	89			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorohexanesulfonic acid (PFHxS)	M24-Ap0019141	NCP	ug/L	0.03	0.02	11	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-Ap0019141	NCP	ug/L	0.10	0.09	5.8	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-Ap0025072	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-Ap0025072	CP	ug/L	0.06	0.06	1.7	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-Ap0025072	CP	ug/L	0.24	0.25	1.1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-Ap0025072	CP	ug/L	0.03	0.03	4.3	30%	Pass	N09
Perfluorooctanoic acid (PFOA)	M24-Ap0025072	CP	ug/L	0.08	0.08	2.0	30%	Pass	N09
Perfluorononanoic acid (PFNA)	M24-Ap0025072	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-Ap0025072	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-Ap0025072	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-Ap0025072	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorotridecanoic acid (PFTrDA)	M24-Ap0025072	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-Ap0025072	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-Ap0025072	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-Ap0025072	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-Ap0025072	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-Ap0025072	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-Ap0025072	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-Ap0025072	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-Ap0025072	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-Ap0025072	CP	ug/L	0.14	0.14	2.1	30%	Pass	N09
Perfluorononanesulfonic acid (PFNS)	M24-Ap0025072	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-Ap0025072	CP	ug/L	0.06	0.06	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-Ap0025072	CP	ug/L	0.16	0.17	4.5	30%	Pass	N09
Perfluoroheptanesulfonic acid (PFHpS)	M24-Ap0025072	CP	ug/L	0.08	0.09	5.9	30%	Pass	N09
Perfluorodecanesulfonic acid (PFDS)	M24-Ap0025072	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-Ap0025072	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-Ap0025072	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-Ap0025072	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-Ap0025072	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
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:



- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Chain of Custody

1105323 HC 6/6/24 Sheet_____of_____

PM Name: [redacted]

Phone: [redacted]

Address: Lvl 28, 600 Bourke St, Melbourne VIC

PM Email: [redacted]

Project Number: 304300114

Laboratory (name, phone,fax no & contact person)

Sample ID	Laboratory ID	Container	Sampling Date	Sampling Time	Sample Matrix: Soil	Sample Matrix: Water	Sample preservation: Ice/Ice Bricks	Analysis: PFAS 28 Suite
0445_QC200_240530		2 x PFAS	30/05/2024			x		x
0445_QC201_240531		2 x PFAS	31/05/2024			x		x
0445_QC202_240531		2 x PFAS	31/05/2024			x		x

Sampler: I attest that the proper field sampling proceedures were used during the collection of these samples. Sampler name: (print and signature) Date:

	Date	Time		Date	Time
Relinquished by (Sampler): (print and signature)			Received by (Courier/Lab): (print and signature)		
Relinquished by: (print and signature)			Received by: (print and signature)		
Relinquished by: (print and signature)			Received by: (print and signature)		

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Chain of Custody

Sheet 2 of 2

PM Name: [redacted]
Phone: [redacted]
Address: Lvl 28, 600 Bourke St, Melbourne VIC
PM Email: [redacted]
Project Number:
Laboratory (name, phone,fax no & contact person)

	Sample ID 240531	Laboratory ID	Container	Sampling Date	Sampling Time	Soil	Water	Ice/Ice Bricks	PFAS 28	
16	0445_SW42_240531		2x PFAS	31/05/24			X		X	
17	0445_QC100_240530			30/5/24					X	
18	0445_QC101_240531			31/5/24					X	
19	0445_QC102_240531			31/5/24					X	
20 →	0445_QC200_240530			30/5/24					X	Forward to Eurofins
21 →	0445_QC201_240531			31/5/24					X	
22 →	0445_QC202_240531			31/5/24					X	
23	" _QC300_240530			30/5/24					X	
24	" _QC301_240531			31/5/24					X	
25	" _QC500_240531			31/5/24					X	
Add. 26	" _MW313_240531			31/5/24						

Sampler: I attest that the proper field sampling proceedures were used during the collection of these samples.

Sampler name: (print and signature) Date:

	Date	Time		Date	Time
Relinquished by (Sampler): (print and signature)			Received by (Courier/Lab): (print and signature)		
Relinquished by: (print and signature)			[redacted]	4/6	11 AM
Relinquished by: (print and s[redacted]	5/6/24		[redacted]	5/6	16:30

9.8°C
ICE

Please supply results electronically in spreadsheet and ESDAT files.

Turn around time: (24 hour/48 hour/3 days/5 days) Please circle

Stantec Australia Pty Ltd
Level 22, 570 Bourke Street
Melbourne
VIC 3000

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: [redacted]

Report **1105323-W**
Project name
Project ID 304300114
Received Date Jun 05, 2024

Client Sample ID			**0445_QC200_240530**	**0445_QC201_240531**	**0445_QC202_240531**
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**M24-Jn0015065**	**M24-Jn0015066**	**M24-Jn0015067**
Date Sampled			**May 30, 2024**	**May 31, 2024**	**May 31, 2024**
Test/Reference	LOR	Unit			
Perfluoroalkyl carboxylic acids (PFCAs)					
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	0.11	0.10
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	0.09	0.14
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	0.01	0.24	0.21
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	[N09]0.02	[N09]0.16
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	[N09]0.02	[N09]0.15
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	0.06
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	0.05
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	0.02
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	%	85	53	57
13C5-PFPeA (surr.)	1	%	100	73	69
13C5-PFHxA (surr.)	1	%	106	83	77
13C4-PFHpA (surr.)	1	%	100	89	88
13C8-PFOA (surr.)	1	%	118	91	90
13C5-PFNA (surr.)	1	%	98	85	94
13C6-PFDA (surr.)	1	%	81	77	92
13C2-PFUnDA (surr.)	1	%	77	60	86
13C2-PFDoDA (surr.)	1	%	92	52	92
13C2-PFTeDA (surr.)	1	%	85	23	71
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	%	77	65	77
D3-N-MeFOSA (surr.)	1	%	55	46	30

Client Sample ID			0445_QC200_240530	0445_QC201_240531	0445_QC202_240531
Sample Matrix			Water	Water	Water
Eurofins Sample No.			M24-Jn0015065	M24-Jn0015066	M24-Jn0015067
Date Sampled			May 30, 2024	May 31, 2024	May 31, 2024
Test/Reference	LOR	Unit			
Perfluoroalkyl sulfonamido substances					
D5-N-EtFOSA (surr.)	1	%	62	47	35
D7-N-MeFOSE (surr.)	1	%	75	49	61
D9-N-EtFOSE (surr.)	1	%	77	45	65
D5-N-EtFOSAA (surr.)	1	%	88	58	120
D3-N-MeFOSAA (surr.)	1	%	89	74	135
Perfluoroalkyl sulfonic acids (PFSAs)					
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	[N09]0.02	[N09]0.17	[N09]0.05
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	[N09]0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.02	0.09	0.02
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.01	[N09]0.09	[N09]0.05
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.08	[N09]0.44	[N09]0.49
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	[N09]0.01	[N09]0.03
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.10	[N09]0.64	[N09]2.4
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	[N09]0.01
13C3-PFBS (surr.)	1	%	106	84	84
18O2-PFHxS (surr.)	1	%	94	84	84
13C8-PFOS (surr.)	1	%	93	83	83
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
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	0.07
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	0.02
13C2-4:2 FTSA (surr.)	1	%	101	121	141
13C2-6:2 FTSA (surr.)	1	%	65	113	185
13C2-8:2 FTSA (surr.)	1	%	125	101	119
13C2-10:2 FTSA (surr.)	1	%	79	45	136
PFASs Summations					
Sum (PFHxS + PFOS)*	0.01	ug/L	0.18	1.08	2.89
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.1	0.66	2.55
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.18	1.1	3.04
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.21	1.73	3.77
Sum of PFASs (n=30)*	0.1	ug/L	0.24	1.92	4.04

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Melbourne	Jun 07, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Jun 07, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Jun 07, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Jun 07, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Jun 06, 2024	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

eurofins

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6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
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+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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Company Name: Stantec Australia Pty Ltd (VIC)
Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000

Project Name:
Project ID: 304300114

Order No.:
Report #: 1105323
Phone:
Fax:

Received: Jun 5, 2024 4:30 PM
Due: Jun 13, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254						X
External Laboratory						
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**	
1	0445_QC200_240530	May 30, 2024		Water	M24-Jn0015065	X
2	0445_QC201_240531	May 31, 2024		Water	M24-Jn0015066	X
3	0445_QC202_240531	May 31, 2024		Water	M24-Jn0015067	X
Test Counts						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 (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	104			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	103			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	102			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	100			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	95			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	100			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	111			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	117			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	117			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	74			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	117			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	104			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	111			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	85			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	100			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	105			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	100			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	101			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	102			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	86			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	102			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	100			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	100			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	99			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	97			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	70			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	108			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	119			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	111			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	105			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)	M24-Jn0015065	CP	%	115			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M24-Jn0015065	CP	%	110			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M24-Jn0015065	CP	%	115			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-Jn0015065	CP	%	114			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M24-Jn0015065	CP	%	113			50-150	Pass	
Perfluorononanoic acid (PFNA)	M24-Jn0015065	CP	%	111			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M24-Jn0015065	CP	%	122			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-Jn0015065	CP	%	125			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-Jn0015065	CP	%	132			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-Jn0015065	CP	%	84			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-Jn0015065	CP	%	133			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M24-Jn0001285	NCP	%	104			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-Jn0001285	NCP	%	96			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-Jn0001285	NCP	%	96			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-Jn0001285	NCP	%	101			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-Jn0001285	NCP	%	98			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-Jn0001285	NCP	%	96			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-Jn0001285	NCP	%	106			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M24-Jn0001285	NCP	%	87			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-Jn0001285	NCP	%	88			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-Jn0001285	NCP	%	94			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-Jn0001285	NCP	%	94			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-My0088855	NCP	%	97			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-Jn0001285	NCP	%	97			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-My0088855	NCP	%	87			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-Jn0001285	NCP	%	75			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-Jn0001285	NCP	%	101			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-My0088855	NCP	%	102			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-Jn0001285	NCP	%	105			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-Jn0001285	NCP	%	93			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-Jn0015066	CP	ug/L	0.11	0.11	2.3	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-Jn0015066	CP	ug/L	0.09	0.09	1.2	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-Jn0015066	CP	ug/L	0.24	0.24	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-Jn0015066	CP	ug/L	0.02	0.02	1.5	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-Jn0015066	CP	ug/L	0.02	0.02	1.7	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-Jn0015066	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-Jn0015066	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-Jn0015066	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-Jn0015066	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-Jn0015066	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-Jn0015066	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-Jn0015066	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-Jn0015066	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-Jn0015066	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-Jn0015066	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-Jn0015066	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-Jn0015066	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-Jn0015066	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-Jn0015066	CP	ug/L	0.17	0.17	1.5	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-Jn0015066	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-Jn0015066	CP	ug/L	0.09	0.09	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-Jn0015066	CP	ug/L	0.09	0.08	2.1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-Jn0015066	CP	ug/L	0.44	0.44	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-Jn0015066	CP	ug/L	0.01	< 0.01	4.2	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-Jn0015066	CP	ug/L	0.64	0.65	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-Jn0015066	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-Jn0015066	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-Jn0015066	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-Jn0015066	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-Jn0015066	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
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:



Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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APPENDIX

D

FIELD RECORDS & CALIBRATION CERTIFICATES

Event	Location	Property	Easting	Northing	Monitoring Date	Bore Depth (m bTOC)	Top of casing (mAHD)	SWL (bTOC)	SWL (mAHD)	Other Observations on Bore/Site	Temp (C°)	DO (mg/L)	EC (us/Cm)	TDS	pH	Eh (mV)
E6	MW009	East BMA	495603.37	5999848.02	4/04/24	9.3	166.28	7.463	158.817	Low turbidity at bottom of sleeve	18.5	0.79	273.4	177.71	5.86	187.4
E6	MW012	East BMA	495534.14	5999634.04	4/04/24	10.54	167.36	8.342	159.018	Sediment in bottom of sleeve	19.4	1.48	227.6	147.94	5.95	187.8
E6	MW016	East BMA	495641.49	5999946.12	4/04/24	10.78	166.16	7.541	158.619	-	17.5	1.78	327.5	212.875	5.98	173.3
E6	MW018	East BMA	495834.7	5999717.39	4/04/24	10.54	165.43	6.965	158.465	Brown sediment at bottom of sleeve, no sheen, no odour	16.5	1.59	558	362.7	6.68	61.8
E6	MW020	East BMA	495826.29	5999801.5	4/04/24	7	165.41	6.897	158.513	Brown water, slight sheen, no odour, organic material	17.4	1.54	306.1	198.965	6.29	-10.1
E6	MW029	East BMA	495426.45	5999463.69	4/04/24	11.06	168.11	8.183	159.927	Sediment in sleeve, more prominent at bottom of sleeve	19.3	3.16	155.8	101.27	5.53	188.5
E6	MW034	East BMA	495753.66	5999858.29	4/04/24	11.27	166.63	8.095	158.535	Sediment and suspended particles, ants, no odour, no sheen	17	2.33	239.2	155.48	6.26	76.3
E6	MW035	East BMA	495683.72	5999911.25	4/04/24	11.25	166.22	7.646	158.574	-	17.7	1.07	258.5	168.025	5.9	178.6
E6	MW042	East BMA	495677.04	5999879.86	4/04/24	12.83	166.62	7.955	158.665	-	17.4	1.11	243.7	158.405	5.93	181.6
E6	MW043	East BMA	495680.27	5999879.94	4/04/24	12.83	166.55	7.874	158.676	-	17.5	0.85	245.1	159.315	5.93	181.2
E6	MW046_D	East BMA	495752.6462	5999856.216	4/04/24	22.4	166.49	8.745	157.745	Clear water, black suspended particles, no odour, no sheen	17.1	0.91	230.9	150.085	6.27	76.7
E6	MW046_I	East BMA	495752.45	5999855.99	4/04/24	14.07	166.48	7.95	158.530	Clear, no odour, no sheen	16.4	1.31	238.1	154.765	6.27	74.8
E6	MW051	South BMA	492170.29	5999844.58	4/04/24	30.5	187.95	24.285	163.665	-	-	-	-	-	-	-
E6	MW052	East BMA	495251.08	5999549.74	4/04/24	9.78	168.49	8.345	160.145	Lots of ants in sleeve and low amount of water	15.1	1.77	108.7	70.655	6.11	-83.4
E6	MW056	South BMA	492586.19	5999891.194	4/04/24	3.675	183.59	2.255	181.335	-	24.6	1.6	561	364.65	6.37	159.5
E6	MW304	South BMA	491289.32	6000521.98	4/04/24	22	176.131	15.797	160.334	Sediment in bottom of sleeve	19.6	2.46	12632	8210.8	6.41	189.7
E6	MW307	South BMA	491307.09	6000261.17	4/04/24	27.808	181.086	19.77	161.316	-	19.4	2.41	4518	2936.7	6.27	136.4
E6	MW311	South BMA	491514.62	6000214.45	3/04/24	22.94	182.452	20.34	162.112	-	-	-	-	-	-	-
E6	MW312	South BMA	491682	6000520	4/04/24	17.67	175.841	11.363	164.478	Sediment in bottom of sleeve	18.7	4.31	4642	3017.3	7.33	166.3
E6	MW313	South BMA	491109.26	5999857.371	3/04/24	34.2	193.128	30.1	163.028	-	-	-	-	-	-	-
E6	MW315	South BMA	491244	5999661	3/04/24	43.3	204.875	41.402	163.473	-	-	-	-	-	-	-
E6	MW317	South BMA	491231	5999650	3/04/24	40	204.364	37.885	166.479	-	-	-	-	-	-	-

Event	Location	Property	Easting	Northing	Monitoring Date	Bore Depth (m bTOC)	Top of casing (mAHD)	SWL (bTOC)	SWL (mAHD)	Other Observations on Bore/Site	Temp (C°)	DO (mg/L)	EC (us/Cm)	TDS	pH	Eh (mV)
E6	MW318	South BMA	491261	5999655	-	42.13	205.965	Dry	-	Dry	-	-	-	-	-	-
E6	MW319	South BMA	491998	5999572	3/04/24	43	199.524	35.174	164.350	-	-	-	-	-	-	-
E6	MW321	South BMA	492074	5999548	3/04/24	40	200.815	36.285	164.530	-	-	-	-	-	-	-
E6	MW323	South BMA	492216	5999856	3/04/24	23	184.472	19.455	165.017	-	-	-	-	-	-	-
E6	MW329	South BMA	492199	6000242	3/04/24	20	181.435	15.05	166.385	-	-	-	-	-	-	-
E6	MW342	North BMA	493664	6000189	4/04/24	17.4	180.605	13.272	167.333	-	19.6	2.11	1162	755.3	9.4	110.1
E6	MW345	North BMA	494540.0159	6000004.639	4/04/24	5.57	168.316	5.321	162.995	Black water, no sheen, slight organic odour	19.9	0.93	5630	3659.5	6.48	-26.4
E6	MW346	North BMA	494632.8818	6000226.289	4/04/24	8.91	166.944	3.429	163.515	No odour, no sheen	21.7	3.24	1686	1095.9	7.12	57.8
E6	MW350_D	East BMA	495299.3	5999571.3	4/04/24	20.55	168.229	8.395	159.834	Low turbidity in bottom of sleeve	15.9	1.55	202.3	131.495	5.96	103.3
E6	MW350_S	East BMA	495299.2786	5999572.637	4/04/24	10	168.233	8.437	159.796	-	16	3.96	252.2	163.93	5.91	184.2
E6	MW351	East BMA	495382	6000184	4/04/24	8.94	164.79	6.12	158.670	Cloudy turbid water and suspended particles, no odour, no sheen	16.1	1.37	128.4	83.46	5.9	37.3
E6	MW352	Offsite	495498.5917	6000070.767	3/04/24	9.83	164.493	5.831	158.662	Internal Lab qc	16.7	1.07	131.4	85.41	6.11	153.4
E6	MW353	East BMA	495479	5999808	4/04/24	7.9	166.625	7.6	159.025	Insufficient water for parameters, top weight present	-	-	-	-	-	-
E6	MW354	East BMA	495767.2	5999625.8	4/04/24	11.07	166.625	7.455	159.170	Clear water in top half of sleeve cloudy on bottom, ants in sleeve	16.1	1.66	154.5	100.425	6.12	56.9
E6	MW356	Offsite	496059.8	6000518.4	5/04/24	3.82	156.882	2.439	154.443	-	20.3	4	173.8	112.97	6.6	-38.2
E6	MW357	Offsite	495793.409	6001682.218	4/04/24	5.24	NS	3.319	NM	Top of casing found to be broken. Needs to be repaired and resurveyed.	22	0.65	163.1	106.015	6.18	-34.6
E6	MW360	Offsite	490936.641	6001498.751	4/04/24	12.91	164.89	8.03	156.860	-	21.3	3.92	369.5	240.175	7.44	142.8
E6	MW361	Offsite	490943.836	6003056.8	6/04/24	6.34	153.716	2.2	151.516	Brown sediment at bottom, no odour, no sheen	21.6	1.2	1031	670.15	6.18	37.7
E6	MW403	Offsite	495309.1344	5999587.996	5/04/24	9.89	166.926	7.155	159.771	Sediment in bottom of sleeve	19.8	3.55	260.5	169.325	5.79	186.9
E6	MW404	Offsite	495263.4936	5999635.621	4/04/24	10.18	166.617	7.04	159.577	Brown sediment at bottom, no odour, no sheen	18.3	1.75	308.8	200.72	6.13	131.9
E6	MW416	Onsite	492208.5363	5999853.804	3/04/24	30	187.72	23.515	164.205	-	-	-	-	-	-	-
E6	OTH019	Offsite	-	-	3/04/24	-	-	-	-	Sampled from tap, tap run for 1 minute prior to sampling	20.1	2.96	351.7	228.605	6.01	93

NS = Not Surveyed
NM = Not Measured

Surface Water Field Data Records

Event	Location ID	Property	Easting	Northing	Monitoring Date	Water body depth (m)	Sample Depth (m)	Flow Rate	Water Colour	Turbidity	Other Observations	Temp (Co)	DO (mg/L)	EC (us/Cm)	TDS (mg/L)	pH	Eh (mV)
E6	SW302	On-base	491217	5999668	2/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW307	On-base	491296	5999663	2/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW310	On-base	491245	6000071	2/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW310	On-base	491245	6000071	31/05/2024	0.05	0.1	No	Clear	Low	No foaming, no microorganisms, no algae, no sheen, no odour	15.2	4.31	116.4	75.66	6.55	*
E6	SW311	On-base	491280	6000430	2/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW311	On-base	491280	6000430	31/05/2024	0.05	0.01	No	Brown clear	No	No foaming, no microorganisms, no algae, no sheen, no odour	14.2	6	379.3	246.545	7.57	*
E6	SW313	On-base	491321	6000251	2/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW316	On-base	491421	6000456	2/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW316	On-base	491421	6000456	31/05/2024	0.1	0.01	No	Clear slight brown	Low	No foaming, no microorganisms, no algae, no sheen, no odour	12.9	4.37	121.3	78.845	6.21	*
E6	SW321	On-base	491612	6000381	2/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW321	On-base	491612	6000381	31/05/2024	0.1	0.05	No	Brown cloudy	High	No foaming, no microorganisms, no algae, no sheen, no odour	13	3.99	473.3	307.645	6.73	*
E6	SW322	On-base	491706	6000527	2/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW322	On-base	491706	6000527	31/05/2024	0.1	0.01	Low	Cloudy	Medium	Foaming present, no microorganisms, no algae, no sheen, no odour	14.3	5.82	429.2	278.98	5.8	*
E6	SW323	On-base	491860	6000478	2/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW323	On-base	491860	6000478	31/05/2024	Unknown	0.1	No	Cloudy	Medium	No foaming, no microorganisms, no algae, no sheen, no odour	15	6.47	112	72.8	7.15	*
E6	SW324	On-base	491976	6000279	3/04/2024	0.2	0.1	No	Cloudy	Low	No foaming, no microorganisms, no algae, no sheen, no odour	18.6	2.89	136.4	88.66	5.82	94.8
E6	SW326	On-base	491968	5999998	2/04/2024	0.2	0.15	No	Cloudy	Medium	No foaming, no microorganisms, no algae, no sheen, no odour	20.7	4.62	91.3	59.345	6.38	34.8
E6	SW332	On-base	492126	6000156	2/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW332	On-base	492126	6000156	31/05/2024	0.2	0.1	No	Cloudy brown	Medium	No foaming, no microorganisms, no algae, no sheen, no odour	14.8	5.56	106.4	69.16	6.56	*
E6	SW333	On-base	492177.00	6000246.00	5/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW333	On-base	492177.00	6000246.00	31/05/2024	0.3	0.1	No	Cloudy	Medium	Foaming present, no microorganisms, no algae, no sheen, no odour	14.6	6.46	98.6	64.09	7.04	*
E6	SW336	On-base	492186.00	5999832.00	5/04/2024	-	-	-	-	-	Dry				0		
E6	SW338	On-base	492273	6000114	2/04/2024	Unknown	0.4	No	Clear	No	No foaming, no microorganisms, no algae, no sheen, no odour	22	8.16	167.3	108.745	9.86	-35.2
E6	SW340	On-base	492352	6000181	2/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW340	On-base	492352	6000181	31/05/2024	0.1	0.05	No	Cloudy	Medium	No foaming, no microorganisms, no algae, no sheen, no odour	14.8	6.46	241.9	157.235	6.51	*
E6	SW346	On-base	492606	6000048	2/04/2024	Unknown	0.10	No	Cloudy	No	No foaming, no microorganisms, no algae, no sheen, no odour	20.30	3.06	151.80	98.67	6.58	85.90
E6	SW349	On-base	492827	5999999	2/04/2024	Unknown	0.4	Low	Cloudy	Low	No foaming, no microorganisms, no algae, no sheen, no odour	22.7	4.33	95.5	62.075	7.25	-1.1
E6	SW355	On-base	492997	5999947	2/04/2024	Unknown	0.3	Low	Cloudy	Low	No foaming, no microorganisms, no algae, no sheen, no odour	21	3.8	74.6	48.49	7.15	36.6
E6	SW370	On-base	494029	5999774	2/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW374	On-base	494552	6000001	4/04/2024	0.2	0.05	No	Cloudy slight brown	Low	No foaming, no microorganisms, no algae, no sheen, no odour	19.2	4.41	224	145.6	6.43	37.9
E6	SW375	On-base	494650	6000239	4/04/2024	0.5	0.3	No	Clear	No	No foaming, no microorganisms, no algae, no sheen, no odour	19.2	2.27	102.4	66.56	5.96	92.2
E6	SW379	On-base	495222	5999565	2/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW380	On-base	495340	5999652	3/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-

Surface Water Field Data Records

Event	Location ID	Property	Easting	Northing	Monitoring Date	Water body depth (m)	Sample Depth (m)	Flow Rate	Water Colour	Turbidity	Other Observations	Temp (Co)	DO (mg/L)	EC (us/Cm)	TDS (mg/L)	pH	Eh (mV)
E6	SW382	On-base	495424	6000092	4/04/2024	0.5	0.1	No	Clear	No	No foaming, no microorganisms, no algae, no sheen, no odour	16.5	4.74	29.4	19.11	6.32	40.5
E6	SW387	On-base	496084	5999677	5/04/2024	0.3	0.1	No	Clear	No	No foaming, no microorganisms, no algae, no sheen, no odour	18	2	395.5	257.075	6.12	158.3
E6	SW388	On-base	496272	5999749		-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW390	Off-base	497942	5998177	5/04/2024	1	0.3	High	Clear	No	No foaming, no microorganisms, no algae, no sheen, no odour	19.3	6.05	48.9	31.785	7.11	86.2
E6	SW393	Off-base	496243.473	5999357.975	5/04/2024	0.4	0.1	No	Cloudy	Low	No foaming, microorganisms present, no algae, no sheen, no odour	22.7	5.24	279.5	181.675	7.25	79.2
E6	SW395	Off-base	496191	5999895	5/04/2024	0.3	0.1	No	Cloudy	Medium	No foaming, no microorganisms, no algae, no sheen, no odour	17.5	3.51	120.8	78.52	6.55	165.3
E6	SW396	-	-	-	2/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW397	-	-	-	5/04/2024	0.15	0.05	No	Clear slight brown	Low	No foaming, no microorganisms, no algae, no sheen, no odour	20.7	4.67	428	278.2	7.69	58.3
E6	SW398	Off-base	496369	6000178	5/04/2024	1	0.2	Medium	Clear	No	No foaming, no microorganisms, no algae, no sheen, no odour	18.4	6.55	42	27.3	7.2	129
E6	SW400	-	-	-	5/04/2024	0.1	0.05	No	Dark brown	High	No foaming, no microorganisms, no algae, no sheen, slight dirty water odour	19.6	2.44	197.6	128.44	6.81	43.4
E6	SW401	Off-base	-	-	3/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW403	Off-base	495794	6000721	3/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW404	Off-base	495932	6000777	3/04/2024	1	0.1	High	Clear	No	No foaming, no microorganisms, no algae, no sheen, no odour	20.9	5.93	44.3	28.795	7.06	91.4
E6	SW405	Off-base	495713.695	6000917.234	5/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW409	Off-base	495342	6000744	3/04/2024	0.5	0.2	No	Clear	No	No foaming, no microorganisms, no algae, no sheen, no odour	19.7	3.29	116	75.4	5.85	100.2
E6	SW412	Off-base	495462.229	6001117.465	4/04/2024	0.1	0.05	No	Clear slight brown	Low	No foaming, no microorganisms, algae present, no sheen, no odour	23.2	4.6	349.7	227.305	6.86	165.3
E6	SW416	Off-base	495852	6001776	4/04/2024	Unknown	0.1	High		No	No foaming, no microorganisms, no algae, no sheen, no odour	21.6	7.14	44.8	29.12	6.71	8.5
E6	SW424	Off-base	491511	6000639	5/04/2024	0.4	0.15	No	Clear	No	No foaming, no microorganisms, no algae, no sheen, no odour	17.9	6.17	83.8	54.47	7.14	142.6
E6	SW427	Off-base	490948.719	6001301.831	2/04/2024	1	0.2	High	Cloudy	Low	Foaming at base of waterfall, microorganisms present, no algae no sheen, no odour	20.2	3.48	79.1	51.415	6.71	49.9
E6	SW430	Off-base	490913	6002786	3/04/2024	1	0.2	No	Slightly cloudy	Low	No foaming, no microorganisms, no algae, no sheen, no odour	23.7	3.62	119.9	77.935	6.75	101.5
E6	SW431	Off-base	490883.28	6003648.067	3/04/2024	0.15	0.1	No	Clear	No	No foaming, no microorganisms, no algae, no sheen, no odour	22.1	2.5	97.3	63.245	6.04	113.5
E6	SW432	Off-base	490789	6003749	3/04/2024	0.15	0.15	Low	Clear	No	No foaming, no microorganisms, no algae, no sheen, no odour	24	5.19	101.5	65.975	6.86	96.5
E6	SW434	Off-base	490476	6003891	3/04/2024	0.4	0.15	No	Clear	No	No foaming, no microorganisms, no algae, no sheen, no odour	23.9	6.01	53.2	34.58	7.2	94.1
E6	SW448	On-base	491960.62	5999684.386	2/04/2024	0.05	0.05	No	Clear	No	No foaming, no microorganisms, no algae, no sheen, no odour	20.5	1.02	89.5	58.175	5.95	-51.9
E6	SW462	Off-base	495777.322	6001658.164	5/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW462	Off-base	495777.322	6001658.164	31/05/2024	Unknown	0.20	0.10	Cloudy	Medium	No foaming, no microorganisms, no algae, no sheen, no odour	17.4	4.8	238.4	154.96	7.53	*
E6	SW463	Off-base	491216.273	6000546.538	5/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW470	Off-base	496154.227	6000093.247	5/04/2024	0.2	0.1	No	Slightly cloudy	Low	No foaming, no microorganisms, algae on rocks beneath surface, no sheen, no odour	18.4	3.31	157.5	102.375	6.64	91.8
E6	SW471	Off-base	495945.936	6000282.565	5/04/2024	-	-	-	-	-	Dry	-	-	-	-	-	-
E6	SW487	Off-base	495826.912	6000046.42	5/04/2024	Unknown	0.1	No	Slightly cloudy	Low	No foaming, no microorganisms, no algae, slight organic sheen, no odour	20.7	6.86	410.6	266.89	7.8	67

* - Denotes value omitted as redox potential sensor likely faulty for sampling event.

Event	Location ID	Property	Easting	Northing	Monitoring Date	Other Observations
E6	SD395	On-base	491860.00	6000478.00	2/04/2024	Clayey silt, wet, with organic material present soft and loose poorly graded fine-grained no odour no staining
E6	SD400	On-base	492606.00	6000048.00	2/04/2024	Clay, dark brown mottled orange, low plastic, wet, no odour
E6	SD323	On-base	492997.00	5999947.00	2/04/2024	Silty sandy clay, grey brown, soft, rootlets and leaves, high plasticity, wet, no odour, no staining
E6	SD346	On-base	494650.00	6000239.00	4/04/2024	Sandy silty clay, grey brown with orange mottling, wet, moderate to high plasticity, no odour, no staining
E6	SD355	On-base	495424.00	6000092.00	4/04/2024	Clay silty sand, minimal roots present, no odour, dark grey brown to brown colour, no staining slightly firm, no trace gravels poorly graded fine grain size
E6	SD375	Off-base	496191.00	5999895.00	5/04/2024	Silty gravely clay, wet, grey brown, fine gravels, no odour
E6	SD382	Off-base	-	-	2/04/2024	Gravelly sandy silt, organic, grey brown, well graded, medium grained, wet
E6	SD396	Off-base	-	-	5/04/2024	Silty clay, dark brown orange, medium plastic, stiff, moist, no odour
E6	SD397	Off-base	-	-	5/04/2024	Sandy silt, small gravels, poorly graded, wet, loose, dark brown, no odour
E6	SD412	Off-base	495462.23	6001117.47	5/04/2024	Sandy silt high presence of organic material including roots and leaf litter, slightly moist, dark brown, soft and poorly graded and fine to medium grain. no odour
E6	SD424	Off-base	491511.00	6000639.00	5/04/2024	Sandy silt high presence of organic material including roots and leaf litter, slightly moist, dark brown, soft and poorly graded and fine to medium grain, no odour
E6	SD463	Off-base	491216.27	6000546.54	5/04/2024	Silty clay dry light brown, organic material such as leaf litter present on top of sediment surface, no odour, no staining, slightly firm

NO - No odour
NS - No staining
OM - Organic matter

Equipment Calibration Form
YSI ProPlus

Enqip #: 21941
Company: Stantec Australia Pty Ltd
Consultant: [redacted]
PO #: 304300114
Certificate #: 32331

INSTRUMENT IDENTIFICATION

Model Number: 6050000
Serial Number: 21A103775
Instrument Type: YSI ProPlus

INSPECTION RECORD

Batteries Checked:	PASS	**Date & Time:**	PASS
Electrodes Cleaned/Checked:	PASS	**Temperature:**	PASS

CALIBRATION DETAILS

Sensor	Cal Solution	Value	Reading
pH	Buffer 4.00	4.00 pH	4.00 pH
	Buffer 7.00	7.00 pH	7.00 pH
Redox	Standard ORP	234.5 mV @ 20.0 °C	234.5 mV
O_2	Zero Dissolved Oxygen	0.0 %	0.0 %
	Air	100.0 %	100.0 %
Conductivity	Standard Conductivity	2.76 mS/cm	2.76 mS/cm

Calibration Successful: YES

Calibrated By: [redacted]

Test Date: 27/03/2024

enqip
116 Thistlethwaite St, South Melbourne 3205
P 1300 218 987
E info@enqip.com.au ¦ W www.enqip.com.au

Equipment Calibration Form
YSI ProPlus

Enqip #: 21941
Company: Stantec Australia Pty Ltd
Consultant: [redacted]
PO #: 304300114
Certificate #: 32332

INSTRUMENT IDENTIFICATION

Model Number: 6050000
Serial Number: 19J104693
Instrument Type: YSI ProPlus

INSPECTION RECORD

Batteries Checked:	PASS	**Date & Time:**	PASS
Electrodes Cleaned/Checked:	PASS	**Temperature:**	PASS

CALIBRATION DETAILS

Sensor	Cal Solution	Value	Reading
pH	Buffer 4.00	4.00 pH	4.00 pH
	Buffer 7.00	7.00 pH	7.00 pH
Redox	Standard ORP	234.5 mV @ 20.0 °C	234.5 mV
O_2	Zero Dissolved Oxygen	0.0 %	0.0 %
	Air	100.0 %	100.0 %
Conductivity	Standard Conductivity	2.76 mS/cm	2.76 mS/cm

Calibration Successful: YES

Calibrated By: [redacted] **Test Date:** 27/03/2024

Stantec

Equipment Bump Test Record
YSI ProPlus Water Quality Meter

Date of Bump Test	Job Number	Unit No. Brand/Model	Ambient Air Oxygen Calibration		Zero % Oxygen Solution Calibration		Standard Concentrations (Y if present)		Ambient Temperature (°C)	Bump Test Readings	Bump Test Readings within ±5%?			Comment	Test by (Name)	(Signature)
3.4	0445	—	100% Saturation?	Y / N	0% Calibration	Y / N	pH 4.00 pH 7.00 pH 10.00 EC: 276 µS/cm @ 25 °C ORP: 227 mV @ 20 °C	Y / N Y / N Y / N Y / N Y / N	19.7	pH 4.00: 4.03 pH 7.00: 7.02 pH 10.00 EC: 264 µS/cm @ 20 °C ORP: 245 mV @ 20 °C	pH 4.00: pH 7.00: pH 10.00 EC: ORP: Temp:	(± pH 0.2) (± pH 0.2) (± pH 0.2) (± 150µS/cm) (± 10mV) (± 2°C)	Y / N Y / N Y / N Y / N Y / N Y / N	NA	[redacted]	[redacted]
4.4	0445	—	100% Saturation?	Y / N	0% Calibration	Y / N	pH 4.00 pH 7.00 pH 10.00 EC: 276 µS/cm @ 25 °C ORP: 241 mV @ 15 °C	Y / N Y / N Y / N Y / N Y / N	15.4	pH 4.00: 4.12 pH 7.00: 7.03 pH 10.00 EC: 267 µS/cm @ 15 °C ORP: 273 mV @ 15 °C	pH 4.00: pH 7.00: pH 10.00 EC: ORP: Temp:	(± pH 0.2) (± pH 0.2) (± pH 0.2) (± 150µS/cm) (± 10mV) (± 2°C)	Y / N Y / N Y / N Y / N Y / N Y / N			
5.4	0445	—	100% Saturation?	Y / N	0% Calibration	Y / N	pH 4.00 pH 7.00 pH 10.00 EC: 276 µS/cm @ 25 °C ORP: 241 mV @ 15 °C	Y / N Y / N Y / N Y / N Y / N	13.2	pH 4.00: 4.15 pH 7.00: 7.07 pH 10.00 EC: 254 µS/cm @ 15 °C ORP: 258 mV @ 13 °C	pH 4.00: pH 7.00: pH 10.00 EC: ORP: Temp:	(± pH 0.2) (± pH 0.2) (± pH 0.2) (± 150µS/cm) (± 10mV) (± 2°C)	Y / N Y / N Y / N Y / N Y / N Y / N			
			100% Saturation?	Y / N	0% Calibration	Y / N	pH 4.00 pH 7.00 pH 10.00 EC: __ µS/cm @ _ °C ORP: __ mV @ _ °C	Y / N Y / N Y / N Y / N Y / N		pH 4.00: pH 7.00: pH 10.00 EC: __ µS/cm @ _ °C ORP: __ mV @ _ °C	pH 4.00: pH 7.00: pH 10.00 EC: ORP: Temp:	(± pH 0.2) (± pH 0.2) (± pH 0.2) (± 150µS/cm) (± 10mV) (± 2°C)	Y / N Y / N Y / N Y / N Y / N Y / N			
			100% Saturation?	Y / N	0% Calibration	Y / N	pH 4.00 pH 7.00 pH 10.00 EC: __ µS/cm @ _ °C ORP: __ mV @ _ °C	Y / N Y / N Y / N Y / N Y / N		pH 4.00: pH 7.00: pH 10.00 EC: __ µS/cm @ _ °C ORP: __ mV @ _ °C	pH 4.00: pH 7.00: pH 10.00 EC: ORP: Temp:	(± pH 0.2) (± pH 0.2) (± pH 0.2) (± 150µS/cm) (± 10mV) (± 2°C)	Y / N Y / N Y / N Y / N Y / N Y / N			
			100% Saturation?	Y / N	0% Calibration	Y / N	pH 4.00 pH 7.00 pH 10.00 EC: __ µS/cm @ _ °C ORP: __ mV @ _ °C	Y / N Y / N Y / N Y / N Y / N		pH 4.00: pH 7.00: pH 10.00 EC: __ µS/cm @ _ °C ORP: __ mV @ _ °C	pH 4.00: pH 7.00: pH 10.00 EC: ORP: Temp:	(± pH 0.2) (± pH 0.2) (± pH 0.2) (± 150µS/cm) (± 10mV) (± 2°C)	Y / N Y / N Y / N Y / N Y / N Y / N			
			100% Saturation?	Y / N	0% Calibration	Y / N	pH 4.00 pH 7.00 pH 10.00 EC: __ µS/cm @ _ °C ORP: __ mV @ _ °C	Y / N Y / N Y / N Y / N Y / N		pH 4.00: pH 7.00: pH 10.00 EC: __ µS/cm @ _ °C ORP: __ mV @ _ °C	pH 4.00: pH 7.00: pH 10.00 EC: ORP: Temp:	(± pH 0.2) (± pH 0.2) (± pH 0.2) (± 150µS/cm) (± 10mV) (± 2°C)	Y / N Y / N Y / N Y / N Y / N Y / N			
			100% Saturation?	Y / N	0% Calibration	Y / N	pH 4.00 pH 7.00 pH 10.00 EC: __ µS/cm @ _ °C ORP: __ mV @ _ °C	Y / N Y / N Y / N Y / N Y / N		pH 4.00: pH 7.00: pH 10.00 EC: __ µS/cm @ _ °C ORP: __ mV @ _ °C	pH 4.00: pH 7.00: pH 10.00 EC: ORP: Temp:	(± pH 0.2) (± pH 0.2) (± pH 0.2) (± 150µS/cm) (± 10mV) (± 2°C)	Y / N Y / N Y / N Y / N Y / N Y / N			

Unit Type: YSI ProPlus
Serial Number:

Job Number: 30430014

Date of Bump Test	Ambient Air Oxygen Calibration	Zero % Oxygen Solution Calibration	Standard Concentrations	Bump Test Reading	Bump Test Readings Accepted?	Test by (Name)	(Signature)
3/4/24	100% Saturation? (Y) N	0% Calibration? (Y) N	pH 4.00 (Y) / N pH 7.00 (Y) / N pH 10.00 Y / (N) EC: 1413 µS/cm @ 25 °C (Y) / N Redox: 240 mV @ 15 °c (Y) / N	pH 4.00: 3.97 pH 7.00: 6.85 pH 10.00: EC: 2758 Redox: 237 @ 16°C	(Y) / N (Y) / N Y / N (Y) / N (Y) / N	[redacted]	[redacted]
4/4/24	100% Saturation? (Y) N	0% Calibration? (Y) N	pH 4.00 (Y) / N pH 7.00 (Y) / N pH 10.00 Y / N EC: __µS/cm @ __°C (Y) / N Redox: ___ mV @ __°c (Y) / N	pH 4.00: 4.05 pH 7.00: 7.03 pH 10.00: EC: 2760 SP Redox: 240 @ 15°C	(Y) / N (Y) / N Y / N (Y) / N (Y) / N		
5/4/24	100% Saturation? (Y) N	0% Calibration? (Y) N	pH 4.00 (Y) / N pH 7.00 (Y) / N pH 10.00 Y / N EC: 1413 µS/cm @ 25 °C (Y) / N Redox: 240 mV @ 15 °c (Y) / N	pH 4.00: 3.99 pH 7.00: 6.98 pH 10.00: EC: 2757 SC Redox: 235 @ 15.6	(Y) / N (Y) / N Y / N (Y) / N (Y) / N		
	100% Saturation? Y N	0% Calibration? Y N	pH 4.00 Y / N pH 7.00 Y / N pH 10.00 Y / N EC: __µS/cm @ __°C Y / N Redox: ___ mV @ __°c Y / N	pH 4.00: pH 7.00: pH 10.00: EC: Redox:	Y / N Y / N Y / N Y / N Y / N		
	100% Saturation? Y N	0% Calibration? Y N	pH 4.00 Y / N pH 7.00 Y / N pH 10.00 Y / N EC: __µS/cm @ __°C Y / N Redox: ___ mV @ __°c Y / N	pH 4.00: pH 7.00: pH 10.00: EC: Redox:	Y / N Y / N Y / N Y / N Y / N		
	100% Saturation? Y N	0% Calibration? Y N	pH 4.00 Y / N pH 7.00 Y / N pH 10.00 Y / N EC: __µS/cm @ __°C Y / N Redox: ___ mV @ __°c Y / N	pH 4.00: pH 7.00: pH 10.00: EC: Redox:	Y / N Y / N Y / N Y / N Y / N		
	100% Saturation? Y N	0% Calibration? Y N	pH 4.00 Y / N pH 7.00 Y / N pH 10.00 Y / N EC: __µS/cm @ __°C Y / N Redox: ___ mV @ __°c Y / N	pH 4.00: pH 7.00: pH 10.00: EC: Redox:	Y / N Y / N Y / N Y / N Y / N		
	100% Saturation? Y N	0% Calibration? Y N	pH 4.00 Y / N pH 7.00 Y / N pH 10.00 Y / N EC: __µS/cm @ __°C Y / N Redox: ___ mV @ __°c Y / N	pH 4.00: pH 7.00: pH 10.00: EC: Redox:	Y / N Y / N Y / N Y / N Y / N		

F3.01 – Quality Control Sample Register

Project Details	
Project Name: Bandiana OMP	Job Number: 304300114
Site Address: BMA	PP/PM: BW
Client Company/Contact: Defence	Date: 2-5 April 2024
Persons Present: MA/JL	Notes By: MA

Quality Control Requirements

Standard QC Sample Requirements (see Proposal for project specific details)

Rinsate Blank:	1/day (even if only placed on hold)
DI Water Blank:	1/day (even if only placed on hold)
Trip Blank:	1/day or 1/esky (if volatiles are suspected or present at site)
Blind Replicate (Primary List):	1 in 10 primary samples
Split Replicate (Secondary List):	1 in 10 primary samples

Labelling

Samples to be labelled **QC##_date** where "**##**" is a numerical sequence commencing at **01** for each field event and **date** is the date of sampling in ddmmyyyy format (**e.g. QC01_03112010**)

Quality Control Sample Register

QC Sample *e.g. QC01_03112010*	***Primary Sample***	***Description***	***DI Water Batch Number***
QC100/200	SW326	Field Dup/Interlab	
QC101/201	SW349	Field Dup/Interlab	
QC102/202	SD346	Field Dup/Interlab	
QC103/203	SD355	Field Dup/Interlab	
QC104/204	SW324	Field Dup/Interlab	
QC105/205	MW350_D	Field Dup/Interlab	
QC106/206	SW382	Field Dup/Interlab	
QC107/207	MW354	Field Dup/Interlab	
QC108/208	MW046_I	Field Dup/Interlab	
QC109/209	MW056	Field Dup/Interlab	
QC110/210	SW375	Field Dup/Interlab	

APPENDIX

E

DATA QUALITY REVIEW

Data Quality Review
Bandiana Military Area, VIC

This Appendix reviews the Quality Assurance (QA) and Quality Control (QC) documentation. Quality assurance encompasses the actions, procedures, checks and decisions undertaken to ensure sample integrity and representativeness, and the reliability and accuracy of analysis results. The QA documentation should also include an indication of the Data Quality Objectives sought in relation to each significant action, test or process involved in the Assessment.

QC activities measure the effectiveness of the QA procedures by undertaking testing, and then comparing results to previously established objectives. QC work will include the internal laboratory testing as well as results of QC samples submitted such as trip blanks and duplicates. The quality of the information and/or data is deemed satisfactory when the QC results demonstrate that agreed objectives have been met.

Cardno undertook a review of its QA/QC as part of the data validation exercise. The findings are summarised below.

QA/QC Aspects	Evidence and Evaluation
	QA Documentation
Sampling and Analysis Quality Plan and Data Quality Objectives	Cardno was engaged by Department of Defence (the client) to carry out the PFAS Ongoing Monitoring Plan (OMP) at Bandiana Military Area (the Site). The monitoring event commenced on 2 April and concluded 5 April 2024. The monitoring event was completed in general accordance with the scope and limitations presented in Cardno's Sampling and Analysis Quality Plan (SAQP) of 28 March 2024 (Our Ref: OMP002_Bandiana_ SAQP_Rev6). The assessment was carried out in general compliance with the following: ▪ Australian Standard (2005) AS 4482-2005 Guide to the investigation and sampling of sites with potentially contaminated soils, Part 1 - Non-volatile and semi-volatile compounds. ▪ Department of Defence (2021), Contamination Management Manual (DCMM), Annex L – Data Management, August 2019, Amended June 2021. ▪ Department of Defence (2019), Pollution Prevention Guideline - Routine Water Quality Monitoring, Department of Defence, Department of Energy, 2018, Quality System Manual Schedule B15. ▪ EPA Victoria (2009), Industrial Waste Resources Guidelines, Sampling and Analysis of Waters, Wastewaters, Soils and Wastes, Publication 701. ▪ Heads of Environmental Protection Authority's Australia and New Zealand (HEPA) (2020), PFAS National Environmental Management Plan (NEMP) Version 2.0, January 2020. ▪ National Environment Protection Council (NEPC) (1999), National Environmental Protection (Assessment of Site Contamination) Measure (as amended 2013) (ASC NEPM). ▪ National Health and Medical Research Council (NHMRC) (2019), Guidance on Per and Polyfluoroalkyl Substances (PFAS) in Recreational Water, August 2019. ▪ USEPA (2006), Guidance for the Data Quality Objectives Process (EPA QA/G-4). A quality control program was implemented during the investigation and the quality assurance procedures used have been reiterated in the report. The investigation was carried out in accordance with the Safe Work method Statements (SWMS) and Health, Safety and Environment Plan (HSEP) for the Site. Detailed work plans were also provided and are outlined in the SAQP.

QA/QC Aspects	Evidence and Evaluation
	The Data Quality Objectives were expressed in terms of the purpose of the assessment and the relevant assessment criteria.
Data Validation Report	This review constitutes a data validation review. This was supported by an Esdat generated "QAQC Checker" excel report, summarised in Tables B4 and B5, Appendix B.
Data Representativeness	
Holding Times	Groundwater and surface water sample analysis holding times were in conformance with EPA Publication IWRG701 2009 *'Sampling and Analysis of Waters, Wastewaters, Soils and Wastes*.
Background Samples	No background samples were collected as part of this assessment.
Equipment Decontamination	The decontamination methodology conducted during this investigation is documented in the body of the report, and was in general conformance with the SAQP and work plans. Reusable sampling equipment was rinsed with Liquinox® and deionised water prior to the collection of each sample.
Data Precision and Accuracy	
QC Testing – Blind Replicates (Primary Lab)	***Groundwater*** ▪ Acceptance Criteria: RPD < 30% ▪ Groundwater Samples Analysed: 33 ▪ Blind Replicate Samples Analysed: 4 ▪ Blind Replicate Analyte Pairs: 112 (excludes 'analytes' that are a summation of other analytes) ▪ Number of Analyte Pairs Exceeding Criteria: 4 ▪ Percentage of Analyte Pairs Exceeding Criteria: 3.57% RPD exceedances were associated with PFAS compounds. Analyte concentrations from the primary sample and their corresponding blind replicate sample pairs were all within one order of magnitude. The majority of PFAS RPD exceedances are attributed to low concentrations of analyte pairs, where small differences can result in disproportionately large RPDs. This is not considered to impact the results of the investigation. The RPD results are presented in Table B4a, Appendix B. ***Surface water*** ▪ Acceptance Criteria: RPD < 30% ▪ Surface water Samples Analysed: 29 ▪ Blind Replicate Samples Analysed: 7 ▪ Blind Replicate Analyte Pairs: 203 (excludes 'analytes' that are a summation of other analytes) ▪ Number of Analyte Pairs Exceeding Criteria: 1 ▪ Percentage of Analyte Pairs Exceeding Criteria: 0.49% RPD exceedances were associated with PFAS compounds. Analyte concentrations from the primary sample and their corresponding blind replicate sample pairs were all within one order of magnitude. The majority of PFAS RPD exceedances are attributed to low concentrations of analyte pairs. This is not considered to impact the results of the investigation. The RPD results are presented in Table B4a, Appendix B. ***Sediment*** ▪ Acceptance Criteria: RPD < 30% ▪ Sediment Samples Analysed: 12 ▪ Blind Replicate Samples Analysed: 2 ▪ Blind Replicate Analyte Pairs: 56 (excludes 'analytes' that are a summation of other analytes) ▪ Number of Analyte Pairs Exceeding Criteria: 1 ▪ Percentage of Analyte Pairs Exceeding Criteria: 1.8% RPD exceedances were associated with PFAS compounds. Analyte concentrations from the primary sample and their corresponding blind replicate sample pairs were all within one order of magnitude. The PFAS RPD exceedance

QA/QC Aspects	Evidence and Evaluation
	is attributed to low concentrations of analyte pairs. This is not considered to impact the results of the investigation. The RPD results are presented in Table B4b, Appendix B.
QC Testing – Field Splits (Secondary Lab)	***Groundwater*** ▪ Acceptance Criteria: RPD < 30% ▪ Groundwater Samples Analysed: 33 ▪ Blind Replicate Samples Analysed: 4 ▪ Blind Replicate Analyte Pairs: 112 (excludes 'analytes' that are a summation of other analytes) ▪ Number of Analyte Pairs Exceeding Criteria: 1 ▪ Percentage of Analyte Pairs Exceeding Criteria: 0.89% RPD exceedances were associated with PFAS compounds. The majority of PFAS RPD exceedances are likely attributed to low concentrations of analyte pairs. A number of RPD exceedances may also be attributed to interlaboratory differences, which can be common and significant, based on a study done by the Queensland Department of Environment and Science and the Victorian Environment Protection Authority (Vardy et al, 2018). Overall, these RPD exceedances are not considered to impact the results of the investigation. The RPD results are presented in Table B4a, Appendix B. ***Surface water*** ▪ Acceptance Criteria: RPD < 30% ▪ Surface water Samples Analysed: 29 ▪ Blind Replicate Samples Analysed: 7 ▪ Blind Replicate Analyte Pairs: 203 (excludes 'analytes' that are a summation of other analytes) ▪ Number of Analyte Pairs Exceeding Criteria: 6 ▪ Percentage of Analyte Pairs Exceeding Criteria: 2.96% RPD exceedances were associated with PFAS compounds. The majority of PFAS RPD exceedances are likely attributed to low concentrations of analyte pairs. A number of RPD exceedances may also be attributed to interlaboratory differences, which can be common and significant, based on a study done by the Queensland Department of Environment and Science and the Victorian Environment Protection Authority (Vardy et al, 2018). Overall, these RPD exceedances are not considered to impact the results of the investigation. The RPD results are presented in Table B4a, Appendix B. ***Sediment*** ▪ Acceptance Criteria: RPD < 30% ▪ Sediment Samples Analysed: 12 ▪ Blind Replicate Samples Analysed: 2 ▪ Blind Replicate Analyte Pairs: 56 (excludes 'analytes' that are a summation of other analytes) ▪ Number of Analyte Pairs Exceeding Criteria: 1 ▪ Percentage of Analyte Pairs Exceeding Criteria: 1.78% RPD exceedances were associated with PFAS compounds. The majority of PFAS RPD exceedances are likely attributed to low concentrations of analyte pairs. A number of RPD exceedances may also be attributed to interlaboratory differences, which can be common and significant, based on a study done by the Queensland Department of Environment and Science and the Victorian Environment Protection Authority (Vardy et al, 2018). Overall, these RPD exceedances are not considered to impact the results of the investigation. The RPD results are presented in Table B4a, Appendix B.
Trip Blanks	Five (5) trip blanks were collected, and laboratory tested for PFAS. All analytes were reported below the limit of reporting (LOR). Trip blank results are presented in Table B5, Appendix B.
Laboratory Internal QC	Evidence of the laboratories internal QC testing is present and complete. Both ALS (the primary laboratory) and Eurofins-mgt performed internal QC with

QA/QC Aspects	Evidence and Evaluation
	adequate testing and mostly satisfactory results for matrix spikes, method blanks and laboratory duplicates. Exceptions include: **Report EM2405446** ▪ Matrix Spikes: recovery not determined, background level greater than or equal to 4x spike level. **Report EM2405437** ▪ Matrix Spikes: recovery not determined, background level greater than or equal to 4x spike level. **Report EM2405436** ▪ Matrix Spikes: recovery not determined, background level greater than or equal to 4x spike level. **Report EM2405435** ▪ Matrix Spikes: recovery not determined, background level greater than or equal to 4x spike level. These exceptions are not considered to impact the results of the investigation.
Laboratory Method Detection Limit	Laboratory reports indicate the method detection limits were lower than the respective assessment criteria.
NATA endorsement of laboratory reports	Laboratory reports were stamped with the NATA endorsement stamp and signature. Laboratory reports are included in Appendix C of this report.
Calibration of Field Equipment	All field equipment used was calibrated by the equipment supplier. Certificates and daily bump test records are included in Appendix D of this report.
Decontamination and Equipment Blanks	Ten (10) rinsate blanks were collected during the investigation. Six rinsate blank samples were tested for PFAS which all reported a concentration below the laboratory LOR, whilst four were placed on hold. Results are shown in Table B5, Appendix B.
Data Comparability	
Full Review of Data	Once all results have been received, Cardno undertook a full review of the data for any anomalies in consideration of historical data at each location (where available), such as first-time detections or exceedances being reported at locations which have not had detections or exceedances previously. Where potentially anomalous data is identified or suspected, further confirmatory measures were undertaken such as re-extraction and reanalysis of the sample by the laboratory and/or additional data quality review. The following samples were reanalysed: MW018, MW056, MW304, MW351, MW353, MW356, SW326 and SW424. All original results were confirmed.
Standard Procedures	Fieldwork procedures are detailed in the report and followed the work methods outlined in the SAQP.
Qualified Personnel	Staff involved in managing and reviewing the project and those involved in fieldwork are qualified personnel.
Sample Integrity	Field Chain of Custody forms are included in Appendix C of this report and demonstrate sample integrity.
Data Completeness	
Completeness of Test Program	The scope of work undertaken was generally consistent with that set out in the SAQP. Variations to the SAQP are detailed in the Factual Report.
Validity of Data Set	The data quality review indicates no significant systematic errors in the data collection process for surface water and groundwater and therefore, the data set used as the basis for the assessment is considered valid and complete.

APPENDIX

F

INFORMATION ABOUT ENVIRONMENTAL REPORTS

About Site Environmental Assessment Reports

1. Introduction

This document explains the Environmental Site Assessment (ESA) process and the context that applies to the use of Environmental Reports issued by Cardno now Stantec.

2. What is an ESA?

Environmental Site Assessments (ESA) are undertaken for a range of purposes, specific to the brief issued by the client in each case. The scope may include one or a combination of any of the following:

- A factual report of the condition of a portion of the site or one aspect of an entire site.
- Assessment of the contamination levels in soil to be removed from a site – a waste classification assessment.
- Validation of the success of remediation of a site or a portion of a site.
- Provision of a professional opinion about the suitability of a site for one or more uses, in terms of its contamination status.

The scope of any ESA needs to be defined at the outset.

An ESA is not an Environmental Audit. Such audits are undertaken in accordance with the provisions of regulations enacted in various states of Australia, and are referred to as Site Audits in some jurisdictions. Statutory audits provide certification by EPA accredited auditors that a site is suitable for one or more uses. An ESA may provide similar advice but cannot be used in place of an audit if the latter is required by regulation in any instance. However in some circumstances and jurisdictions an ESA is sufficient to provide "environmental sign-off" of a site.

An ESA may be undertaken for due diligence purposes, to establish whether the site has been impacted to the extent that some beneficial uses of the site may be precluded. Due diligence audits in many cases may be completed as non-statutory Audits, although in some jurisdictions they can also be statutory audits, if defined as such at the outset.

3. The ESA Process

The Client generally initiates the ESA process by specifying a brief which identifies the specific objectives of the assessment. If not, it is the consultants' duty to so specify the ESA

In the case of an ESA to provide an opinion about the suitability of the site for use, it would be conducted in accordance with NEPM (Site Assessment). Such ESA would not commence until a thorough site history assessment (Phase 1 Assessment: to identify the potential for significant contamination at a site) is conducted. However, where the history is unclear, a broad screening of chemical parameters can be used to test environmental media. This normally includes a broad range of organic and inorganic compounds and elements, often referred to as an Environmental Screen.

(In the case of an ESA for a purpose other than to provide an opinion about the suitability of the site for use, it is not always necessary to undertake a Phase 1 assessment.)

The ESA requires sampling of soil at representative locations across the site. A NATA accredited laboratory performs the analysis of soil. It is impractical for all of the soil to be assessed. The ESA is often based on a statistical method of grid or random sampling, augmented by targeted sampling at locations known or suspected to be contaminated. Guidance on sampling strategy and density is provided in Australian Standard AS4482.1–2005. However, some considerable degree of judgement is still required in the application of any sampling and testing strategy. For example the blanket application of the "hot spot" method presented in this standard is often inappropriate given its limitations.

The field program also investigates the likelihood of contamination below the site surface. Field investigations must sample and test fill as well as the natural soils. If contamination is found then it is common for further work to be undertaken to characterise, to the extent practical, its vertical and horizontal extent. However, where fill is encountered and testing shows it to be uncontaminated, it must be realised that the heterogeneous nature of the material might mean that not all pockets of contaminated material can be detected using normal sampling regimes.

EPA guidelines for auditors, that may be relevant for an ESA, indicate the need in all cases to consider the potential for groundwater contamination in any site. This does not mean all sites need to be drilled to sample groundwater, but it is most often the case. Most hydrogeological settings and groundwater conditions are complex and vary in space and time. The condition of groundwater is investigated to identify if any beneficial use or environmental value of groundwater is precluded due to contamination.

As previously stated for soil, all groundwater at the site cannot be tested. The environmental investigations are conducted in accordance with industry standards and guidelines (e.g. EPA Vic Pub 668). This provides a level of confidence that a sufficiently comprehensive assessment of the groundwater at the site is achieved.

Where an investigation shows that groundwater is polluted, consideration should be given to assessing the risks and the need for and practicality of any clean up.

4. Environmental Assessment Report

The ESA Report details the findings of the ESA. It provides summary information on the site definition, the reasons for the assessment and other relevant facts. It reviews the scope and quality of the site investigations, laboratory testing and data analyses undertaken. These reports also present a review of the contamination status of the site, the need for any further clean up, and an opinion on the suitability of the site for a range of beneficial uses and land uses such as “residential – low density”, “commercial” etc, as appropriate.

However, as noted above, some ESA have a narrow scope such as for classification of waste soil for removal from site, and do not make conclusions on suitability of site for use.

The ESA Report generally includes copies of other documents and reports, necessary to support the assessment findings, presented as appendices. These can contain more detailed information than the body of the ESA Report. Care should be taken to also read the appended documents and the ESA report in full.

Cardno now Stantec generally issues reports in electronic form (e-Report) on CD ROM. ESA Reports are issued in this format as Adobe Acrobat™ PDF files. However, a paper copy of the executive summary of the ESA Report is generally issued to the client, and others as required by the brief or by regulation.

5. Limitations of Environmental Assessment Report

The ESA Report is prepared in a manner that can be easily read by a lay person with a legitimate interest in the contamination status of the site, such as the site owner or occupier, EPA and Local Planning Authority. The ESA report is not intended for use by other parties or for other purposes. Anyone who uses the assessment report for purposes other than specified in the report, does so at their own risk.

The site should only be used for one or more of the beneficial uses and land uses identified in the ESA as suitable.

The conditions and qualifications may apply to the suitability of the site for use, and it is the responsibility of the Client to be cognizant of and accept these in accepting the report. Cardno now Stantec are only responsible for the issuing of the ESA report but accepts no liability for the costs incurred in the implementation of ESA findings.

The ESA provides a “snapshot” of the site conditions at the time of the site investigation. Consequently, the report may not be valid at a later time if there has been any change to the contamination status of the site in that time. Verification of the status of the site may be required in cases where a significant time has elapsed, or site conditions have changed since the assessment and audit.

The ESA is necessarily limited by constraints such as time, cost and available information; although normal professional practice at the time has been applied with all due care to prepare the report. A necessary requirement of this process is the horizontal and vertical interpolation of data from discrete locations. However, site conditions are generally not homogenous and some discrepancies will occur between the actual and predicted results at locations not directly sampled. There is a risk that contamination may occur at the site and not be identified by a competent investigation and assessment. The approach adopted in sampling (a combination of statistically based grid and judgmental sampling) seeks to reduce, but cannot eliminate, this risk.

Where unexpected occurrences of contamination arise, subsequent to the issue of the ESA Report, Cardno now Stantec should be permitted to make an interpretation of these facts in relation to the ESA Report findings. Consequently, the Client should inform Cardno now Stantec and seek their opinion. Cardno now Stantec accepts no liability for costs incurred due to such unexpected

occurrences, given the inherent uncertainties in the assessment process.

Cardno now Stantec uses information provided by other parties as the basis for the ESA, and reliance on this information is at the discretion of Cardno now Stantec. However, however Cardno now Stantec cannot guarantee any of the facts, findings or conclusions presented by other parties. Cardno now Stantec will not be liable for the use of information, provided by others that is subsequently found to be intentionally misleading.

The ESA Report is not and does not purport to be anything other than a contaminated land ESA. It is not a geotechnical report and bore logs reproduced are for interpretation of the likely distribution of contamination. They are not intended for geotechnical interpretations and may not be adequate for this purpose.

The ESA Report is not intended to be a comprehensive analysis of the presence and associated risk of asbestos in buildings and services. Where asbestos in buildings and services is known or likely, the report may only caution that an appropriately qualified person be engaged to undertake demolition to avoid contamination of the site.

Cardno now Stantec

19 August 2022

Appendix E JBS&G OMP Sampling Event Report – November/December 2024 (JBS&G 2025c)



Bandiana Military Area – PFAS OMP Sampling Event Report – November/December 2024

Department of Defence

Report

JBS&G | 61395 | 165,061

6 May 2025



JBS&G

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

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



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

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Abbreviations

Term	Definition
AFFF	Aqueous Film Forming Foam
ASC NEPM	National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended in 2013)
AS/NZS	Australian/New Zealand Standards
CSM	Conceptual Site Model
CSR	Contaminated Sites Record
DCMM	Defence Contamination Management Manual
Defence	Department of Defence
DO	Dissolved Oxygen
DQI	Data Quality Indicator
EC	Electrical Conductivity
EPA	Environment Protection Authority Victoria
HHERA	Human Health an Ecological Risk Assessment
JBS&G	JBS&G Australia Pty Ltd
LOR	Limit of Reporting
NATA	National Association of Testing Authorities
NEMP	Heads of EPAs Australia and New Zealand (HEPA), PFAS National Environmental Management Plan – Version 2; January 2020
NHRMC	National Health and Medical Research Council
NSW	New South Wales
OMP	Ongoing Monitoring Plan
OMR	Ongoing Monitoring Report
ORP	Oxidation reduction potential
PFAS	Per- and poly-fluoroalkyl substances
PFHxS	Perfluorohexanesulfonic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctanesulfonic acid
pH	Potential of hydrogen
PMAP	PFAS Area Management Plan
QA/QC	Quality Assurance / Quality Control
RPD	Relative Percent Difference
SAQP	Sampling, Analysis and Quality Plan
SER	Sampling Event Report
SWL	Standing Water Level
USEPA	United States Environment Protection Authority
WA DER	Western Australia Department of Water and Environmental Regulation

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Measurements

Term	Definition
°C	Degrees Celsius
cm	Centimetres
m	Metres
m AHD	Metres Australian Height Datum
mbgl	Metres below ground level
mBTOC	Metres below top of case
mg/L	Milligrams per litre
mm	Millimetres
mV	Millivolts
µg/L	Micrograms per Liter
µS/cm	Microsiemens Per Centimetre

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1. Introduction

1.1 Background

JBS&G Australia (JBS&G) was engaged by the Department of Defence (Defence) to conduct ongoing monitoring on and around the Bandiana Military Area, Victoria (the base) as part of the per- and poly-fluoroalkyl substances (PFAS) Management Area Plan (PMAP) Delivery Services. These works are part of a National Defence program to understand the nature and extent of PFAS contamination resulting from the historical use of Aqueous Film Forming Foam (AFFF) on and adjacent identified Defence properties across Australia.

Ongoing monitoring, conducted as part of the Ongoing Monitoring Plan (OMP), is an important aspect of managing PFAS, to understand changes in the nature and extent of contamination. The findings are used to inform whether risks to receptors have changed, and whether a change in management approach may be required. This investigation was completed under the 2020 OMP which is detailed in the PMAP (Defence 2020a).

The base, that is the subject of this report, is located adjacent the New South Wales (NSW) – Victorian State border southeast of Wodonga, Victoria. The location of the base and wider Management Area is shown in **Appendix A, Figure 1.**

This report documents the observations, information and data collected during the November/December 2024 sampling event in the Management Area in accordance with the OMP and the Sampling and Analysis Quality Plan (SAQP) (JBS&G 2024).

1.2 Objectives

The objective of the OMP program was to monitor PFAS concentrations and their extent in surface water and groundwater in the Management Area. The findings of the OMP program will support risk management decisions by Defence and the Victorian Government to protect human health and the environment.

The objectives of the monitoring specified in the OMP are to:

- Evaluate changes in risk from PFAS in surface water and groundwater associated with base sources of PFAS;
- Monitor the migration of PFAS in surface water and groundwater from the base;
- Evaluate the nature and extent of PFAS impact in surface water and groundwater;
- Provide confirmation of the current understanding of risks from PFAS within surface water and groundwater; and
- Where relevant, provide supporting data for assessment of PFAS management actions.

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2. Scope of Work

2.1 Summary of work undertaken

All works completed as part of this sampling event report (SER) were completed in accordance with the OMP SAQP (JBS&G 2024). Any deviations from the proposed scope have been listed in **Section 3**. The scope which was completed is as follows:

- Organise fieldworks and obtain permission to access all monitoring locations;
- Gauging of groundwater monitoring locations;
- Collection of groundwater samples and field parameters;
- Collection of surface water samples and field parameters;
- Analysis of samples by accredited laboratories (as per **Section 2.3**);
- Data management of the OMP field and laboratory data in Defence ESdat database;
- Re-survey one groundwater monitoring well MW357; and
- Preparation of this SER.

2.2 Sampling locations

2.2.1 Groundwater

A total of 44 groundwater monitoring wells were sampled across the base and the Management Area as part of the OMP. Sampling locations and respective catchments are listed in the following **Table 2.1** and are shown in **Appendix A, Figure 4**.

Table 2.1: OMP Groundwater Locations and Catchments

Catchment	Total No.	OMP Groundwater Locations
On-base Locations		
Jack in the Box Creek	13	MW051, MW304, MW307, MW311, MW312, MW315, MW317, MW318, MW319, MW321, MW323, MW329, MW416
Kiewa River	25	MW009, MW012, MW016, MW018, MW020, MW029, MW034, MW035, MW042, MW043, MW046_I, MW046_D, MW052, MW056, MW342, MW345, MW346, MW350_S, MW350_D, MW351, MW352, MW353, MW354, MW403, MW404
Off-base Locations		
Jack in the Box Creek	3	MW313, MW360, MW361
Kiewa River	3	MW356, MW357, OTH019

Multiple geological units are present across the base. In general, groundwater wells within the Jack in the Box Creek catchment, on the western side of the Management Area, are within the Shepparton Colluvium, while wells within the Kiewa River catchment, on the eastern side of the Management Area, are within the Shepparton Fluvium and Coonambidgal Fluvium. **Table 2.2** divides the OMP wells into their respective aquifers.

It is noted that OTH019 is groundwater sampled from a private bore off-base. The well however is not accessed during OMP sampling events (rather a tap is sampled from extracted groundwater which is understood to be held in an above ground storage tank) and the construction details of the well are unknown. As such, this sample location has not been assigned an aquifer and has not been shown in **Table 2.2**.

Table 2.2: OMP Groundwater Monitoring Locations and Aquifers

Geological Unit	Aquifer Interval	Aquifer Depth	Total No.	OMP Wells
Shepparton Colluvium	Shallow 'S'	Variable, based on position on-base. Identified between approximately 5.0 and 42 metre below ground level (mbgl)	17	MW051, MW304, MW307, MW311, MW312, MW313, MW315, MW317, MW318, MW319, MW321, MW323. MW329, MW342, MW360, MW361, MW416
Shepparton Fluvium and Coonambidgal Fluvium	Shallow 'S'	5.0-10.0 mbgl	20	MW012, MW016, MW018, MW020, MW029, MW034, MW035, MW043, MW052, MW345, MW346, MW350_S, MW351, MW352, MW353, MW354, MW356, MW357, MW403, MW404
	Intermediate 'I'	10.0-15.0 mbgl	3	MW009, MW042, MW046_I
	Deep 'D'	>15.0 mbgl	2	MW046_D, MW350_D
Perched Water	-	Approximately 3.0 mbgl	1	MW056

2.2.2 Surface water

A total of 53 surface water locations were sampled across the Management Area as part of the OMP. Sampling locations and respective catchments are listed in the following **Table 2.3** and are shown in **Appendix A, Figure 5A/B**.

Table 2.3: OMP Surface Water Locations and Catchments

Catchment	Total No.	OMP Surface Water Locations
On-base Locations		
Jack in the Box Creek Catchment	16	SW302, SW307, SW310, SW311, SW313, SW316, SW321, SW322, SW323, SW324, SW326, SW332, SW336, SW333, SW338, SW448
Kiewa River Catchment	12	SW340, SW346, SW349, SW355, SW370, SW374, SW375, SW379, SW380, SW382, SW387, SW388
Off-base Locations		
Jack in the Box Creek Catchment	7	SW424, SW427, SW463, SW430, SW431, SW432, SW434
Kiewa River Catchment	18	SW390, SW393, SW395, SW396, SW397, SW398, SW400, SW401, SW403, SW404, SW405, SW409, SW412, SW416, SW462, SW470, SW471, SW487

2.3 Sample Analysis

All water samples were submitted to the following National Association of Testing Authorities (NATA) accredited laboratories for analysis in accordance with **Table 2.4:**

- Eurofins Melbourne (NATA Accreditation Number 1261); and
- Envirolab Melbourne (NATA Accreditation Number 2901).

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Table 2.4: Sample analytical schedule

No. primary samples[1]	Analysis	Method	Limit of Reporting (LOR)
93	Extended PFAS analytical suite	LC/MS-MS	0.001 – 0.1 µg/L
3[2]	Extended PFAS analytical suite – Trace Level	LC/MS-MS	0.001 – 0.01 µg/L

Note:

1. It is noted that **Table 2.4** indicates that 96 samples were analysed while **Section 2.2** indicates 97 sample locations for the program. The discrepancy has occurred as MW318 was identified as dry during gauging and no sample could be collected for analysis.
2. Locations that trace analysis occurred include OTH019, MW351 and MW352.

All methods are in general accordance with the Defence Guidance Document E, Standard PFAS Analytical Suite (Revision 4, 1 October 2021).

Trace level analysis was adopted for three groundwater locations following consultation and agreement with Defence. The three locations represent groundwater conditions which are either leaving the base into residential areas where groundwater bores are a possibility or from 'point of use' groundwater bores. The lower analysis was adopted for this sampling event in response to National Health and Medical Research Council (NHRMC) releasing draft health-based drinking water guideline values which propose lower PFAS criteria than is currently adopted (see **Section 5**).

3. Deviations from the SAQP/OMP

Deviations are not uncommon for reasons of weather conditions, access and safety concerns that inhibit the ability to collect some samples at particular locations. The following **Table 3.1** provides a summary of these concerns during the sampling event and a summary of the impact on the program.

Table 3.1: Deviations from OMP SAQP Summary

Identified Deviation	Impact on OMP Program
The 'spring' round of monitoring was envisaged to be conducted in October, however, did not occur until the end of November/beginning of December (late spring/early summer).	The slight delay for the sampling program was not considered to significantly influence the data set as the intention of the 'spring' sampling round is to collect samples across the Management Area following wet conditions (i.e. winter rains, snow melt in spring, etc). The sampling event detailed in this report coincided with a significant rain event (see **Section 7.1** for further details) which resulted in water within all target water bodies, along with high flows in target rivers and creeks. In addition to this, previous OMP sampling events have occurred during November, and the data collected has not been identified to be different to that collected earlier in the season.
It was intended to complete groundwater gauging as part of a single event (i.e. one day), as far as practicable. This could not be completed as part of this sampling event owing to the following reasons: • Significant rainfall occurred early during the sampling period, resulting in the field team re-prioritising surface water sampling (i.e. while surface water bodies held water) rather than groundwater well gauging and HydraSleeve™ deployment, which was the first task for the OMP; and • A total of three wells were misidentified by the field team during the first week of sampling, resulting in the correct wells being gauged during the second week of sampling.	The aquifers identified across the Management Area are not known to be influenced over the short term by rainfall or other factors. Observations indicate that the hydrogeological parameters, including standing water level (SWL) measured in individual wells and the overall groundwater flow direction, remain consistent with historical data from previous sampling undertaken. This consistency suggests that the aquifers operate under longer-term hydraulic regimes, where recharge and discharge processes are governed more by sustained, rather than more immediate rainfall events.
Field equipment issues were encountered during the sampling event, resulting in missing water parameter data, predominantly for pH and temperature during surface water sampling. Due to the short window available for surface water sampling replacement equipment could not be obtained in time.	Parameters affected were pH (predominantly) or temperature during the surface water sample collection. Other parameter sensors worked correctly during the sampling round. The water quality parameters which were collected are considered reliable for the purposes of groundwater and surface water sampling. Furthermore, it is noted that PFAS concentrations are the primary data point required to achieve the program objectives.
One monitoring well, MW318, could not be sampled as it was found to be dry at the time of sampling in November 2024.	MW315 and MW317 were both able to be sampled during the program. Both these wells target the same Source Area as MW318 and are screened within the same aquifer. Based on historic data, MW318 has frequently been identified as dry, and has not been sampled in seven OMP sampling events.
Monitoring well MW317 was sampled with a bailer instead of HydraSleeve, despite having a water column >1.0 m. This occurred owing to miscommunication with the field staff.	MW317 is located within Source Area 2, and the PFAS concentrations in the well, along with immediately surrounding wells, have consistently been low. Concentrations from the Nov/Dec 2024 event is consistent with historical results identified in the Source Area, which are noted to have primarily been

Identified Deviation	Impact on OMP Program
	collected by HydraSleeve. Based on this, it is considered unlikely that the use of a bailer to sample instead of HydraSleeve has materially influenced the results.
Several wells, including MW018, MW056, MW313 and MW354, were sampled slightly earlier than the required 24-hour HydraSleeve deployment time. This occurred owing to miscommunication with the field staff.	All deployment times which did not meet the SAQP (JBS&G 2024) requirement were all over 23 hours of deployment. All results obtained during the sample event were comparable with historic results. The time difference is therefore not considered to influence the results.
One field personnel failed to record their daily 'bump test' calibration results.	Following the correct calibration procedure would likely have assisted in identifying the surface water parameter sensor issues (identified above) earlier. PFAS concentrations are the primary data point required to achieve the program objectives, therefore, while measures are in place to ensure this information is captured, it is not considered to affect objective and quality of the sampling undertaken.

Overall, the deviations from the OMP SAQP (JBA&G 2024) are not considered to affect the data obtained as part of the program. The data set generated as part of this sampling event has assisted in monitoring changes in PFAS concentrations at the base and across the Management Area.

4. Sampling Methodology

4.1 Groundwater Sampling Methodology

Groundwater sampling was undertaken as per the details in **Table 4.1.** Groundwater gauging and sampling was completed between 25 November and 4 December 2024.

Table 4.1: Groundwater Sampling Methodology

Activity	Details
Well gauging	Prior to sampling, groundwater levels were gauged with an interface probe and measured against a specific mark at the top of the well casing, to assess SWLs. As part of gauging, the well water column was measured, which determined the sampling method: > 1.0 m was sampled via HydraSleeve, while < 1.0 m was sampled via bailer.
HydraSleeve deployment	New HydraSleeves™ were deployed to approximately 10 cm above the base of wells or accumulated sediment layer and left for a minimum of 24 hours.
HydraSleeve sample retrieval	The groundwater sample was collected by pulling the HydraSleeve up through the water column and to the surface at a rate of approximately 30 cm per second. The recovered water sample was decanted into the appropriate laboratory supplied sample bottles.
Bailer sample retrieval	A new disposal bailer was lowered into the well and into the available water column to collect the sample, with care taken not to strike the well base nor to stir up sediment.
Field parameters	Groundwater field parameters were obtained ex situ, using water remaining in the HydraSleeves following sampling. Field measurements recorded comprised the following: temperature, electrical conductivity (EC), dissolved oxygen (DO), oxidation-reduction potential (ORP) and pH.
Decontamination	All reusable monitoring equipment (e.g. interface probe) was cleaned using PFAS-free detergent and PFAS-free deionised water supplied by the analytical laboratory.
Quality Assurance/Quality Control (QA/QC)	The QA/QC program was conducted as per the SAQP (JBS&G 2024). The program included sampling as follows: • Field duplicate (inter-laboratory) samples at 1 per 10 primary samples; • Field triplicate (intra-laboratory) samples at 1 per 10 primary samples; • Rinsate blank samples as one per day, collected from reusable equipment (e.g. interface probe); • Field blank samples collected at a rate of one per day (groundwater and surface water); and • Trip blank samples submitted at a rate of one per laboratory batch (groundwater and surface water).

4.2 Surface Water Sampling Methodology

Surface water sampling was undertaken as per the details in **Table 4.2**. Surface water sampling was completed between 25 November and 4 December 2024.

Table 4.2: Surface Water Sampling Methodology

Activity	Details
Surface water sampling	Surface water samples were collected directly into the laboratory supplied sample container. At each sample location a new sample container was lowered into the water at least 10 cm below the surface (where possible), with the opening facing down to avoid collection of surface films. The cap was applied immediately once the sample container was full. Where surface water was difficult to access, the sample container was attached to the telescopic pole, which was lowered into the water body. The telescopic pole was attached

Activity	Details
	so that the telescopic pole was not in direct contact with the opening of the sample container. During sampling, features such as discolouration, staining, odours and other indications of contamination were noted. Field observations such as flow, turbidity, presence of suspended solids and odours, sheen, oily film, floating debris or frothing were recorded on field sampling sheets. The condition of the water body from which the sample was obtained included a record of the water body type, qualitative flow speed (e.g. stagnant, gentle flow, high flow) and channel width, was also recorded.
Field parameters	Surface water field parameters were obtained at the time of sampling. Field measurements recorded comprised the following: temperature, EC, DO, ORP and pH.
Decontamination	All reusable monitoring equipment (e.g. telescopic pole) was cleaned using PFAS-free detergent and PFAS-free deionised water supplied by the analytical laboratory.
QA/QC	The QA/QC program was conducted as per the SAQP (JBS&G 2024). The program included sampling as follows: • Field duplicate (inter-laboratory) samples at 1 per 10 primary samples; • Field triplicate (intra-laboratory) samples at 1 per 10 primary samples; • Rinsate blank samples as one per day, collected from reusable equipment (e.g. telescopic pole); • Field blank samples collected at a rate of one per day (groundwater and surface water); and • Trip blank samples submitted at a rate of one per laboratory batch (groundwater and surface water).

4.3 Well Survey

It was identified during previous OMP sampling events that the standpipe for monitoring well MW357 was damaged. The standpipe was repaired during early 2024 and resurveyed as part of this OMP sampling event. The well was professionally surveyed, with northing, easting and top of case elevation (metres Australian Height Datum (m AHD)) measurements being recorded.

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5. Screening Criteria

As per the SAQP (JBS&G 2024), the analytical data was screened against relevant Tier 1 Guidance Values as outlined in the ASC NEPM (2013) and PFAS NEMP (HEPA 2020) to identify if the base risk profile has changed compared to the current risk profile.

The adopted Tier 1 screening criteria for the relevant environmental values are provided in the following **Table 5.1**. It should be noted that surface water interacts with groundwater in off-base areas. As such, from a screening perspective, the applicable groundwater criteria were also applied to surface water for the purposes of this assessment.

Table 5.1: Tier 1 Screening Criteria for Water

Adopted Tier 1 Screening Criteria	Relevant Environmental Value	PFOS/PFHxS	PFOA
Freshwater: High conservation/ecological value systems (99% species protection)	Water Dependent Ecosystems and Species	0.00023 µg/L	19 µg/L
Freshwater: Slightly to moderately disturbed systems (95% species protection)		0.13 µg/L	220 µg/L
Drinking water	Traditional Owner Cultural Values, Agriculture and Irrigation (Irrigation and stock watering)	0.07 µg/L	0.56 µg/L
Recreational water	Water-based Recreation (Primary Contact Recreation, Secondary Contact, Aesthetic Enjoyment)	2 µg/L	10 µg/L

Note:

- PFOS – Perfluorooctanesulfonic acid, PFHxS – Perfluorohexanesulfonic acid, and PFOA – Perfluorooctanoic acid.

HEPA 2020 has adopted trigger values or species protection levels for toxicants, which provide guidance for assessment of aquatic ecosystems. Percent species protection levels range from 80% (highly disturbed systems) to 99% (largely unmodified systems). The water bodies on and surrounding the base range in ecosystem disturbance and modification, and as such different protection levels apply. The following is a general guide and justification for adopted species protection based on water feature:

- **On-base constructed stormwater channels, swales or pipework:** No species protection, as protection of environmental values in artificial stormwater drains is not a requirement;
- **On-base stormwater pond, dam or depression**: 95% species protection adopted as vegetation is generally present in and around the moderately to highly modified feature which supports a freshwater ecosystem; and
- **On and off-base water bodies (i.e. rivers, creeks, lakes and wetlands)**: 99% species protection adopted.

In accordance with the SAQP (JBS&G 2024) and for the purposes of this assessment, all results have been compared to 99% species protection as all waters samples have the potential to migrate into on and off-base creeks, lakes, wetlands and retention basins, and the NEMP recommends the adoption of this criteria owing to bioaccumulation and biomagnification in wildlife. The screening criteria for 95% species protection have been provided for reference regarding on-base stormwater ponds, dams or depressions.

In the absence of a published guideline value for irrigation and stock watering, the drinking water values have been considered as an initial screening value, as is consistent with the Human Health an Ecological Risk Assessment (HHERA) (Golder 2020).

No criteria have been adopted for the environmental values Potable Mineral Water Supply, Industrial and Commercial and Geothermal Properties, as these uses are considered unlikely to be realised within the

Management Area. No criteria have been adopted for the environmental value Buildings and Structures as no PFAS criteria have been developed for this scenario and not known to affect the integrity of structures.

It is acknowledged that in November 2024, the NHRMC released draft health-based drinking water guideline values for public consultation. Defence is considering how the draft guidelines, if adopted, may affect its PFAS Investigation and Management Program, and communities surrounding the Defence Estate. An initial step to this is the adoption of a lower laboratory limit of reporting at select locations to understand any future implications (see **Section 2.3**). Until the revised PFAS guideline values are finalised and published, the current guideline values remain in effect.

6. Summary of Data Reliability Assessment

The field and lab QA/QC program including Data Quality Indicators (DQIs) are presented within the SAQP (JBS&G 2024). The data reliability assessment, provided in **Appendix D,** concluded that the field data and analytical results are representative of conditions in the Management Area and the dataset is adequately reliable for the objective of this SER.

The project target for data reliability was 95% compliance with the DQIs. Based on available field and laboratory QA/QC data, 98% compliance was achieved.

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

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7. Field Parameters and Observations

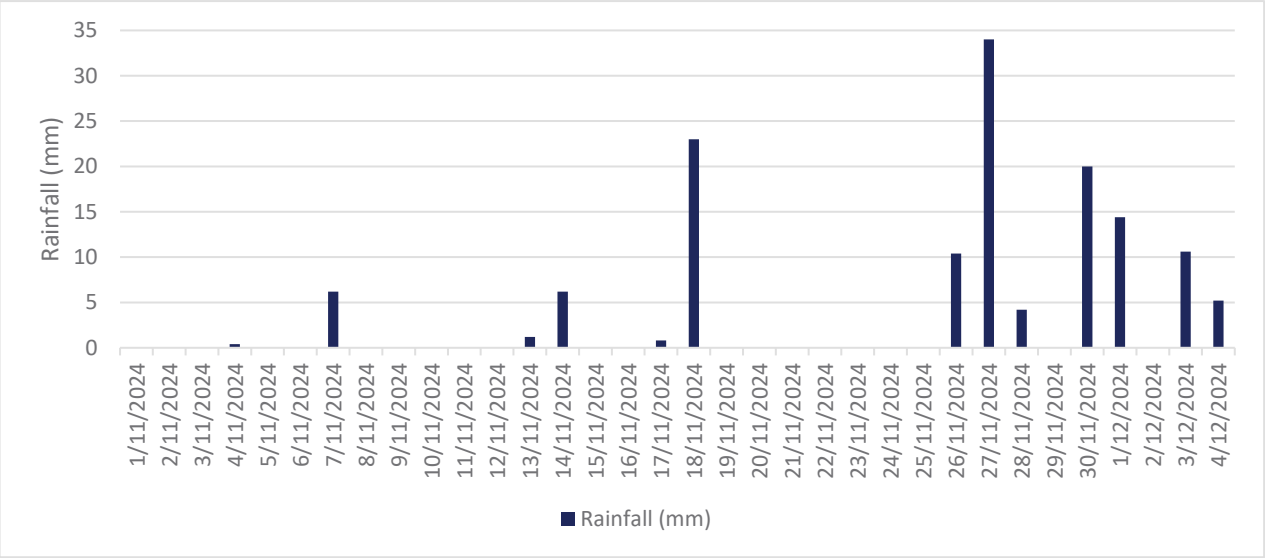
The following sections detail the rainfall, groundwater and surface water monitoring data collected during the sampling event.

7.1 Weather Conditions

The PMAP (Defence 2020a) recommends that OMP surface water sampling is completed after a reasonable rain event (i.e. 35 mm of rain over a 4-day period) if possible, as many of the water bodies targeted by the OMP are ephemeral.

During the November/December 2024 sampling event (25 November to 4 December) a total of 98.8 mm of rain was recorded at the nearest weather station in Wodonga (weather station 082056). The monthly rainfall for November 2024 (106.4 mm) was well above the historical mean of 51.4 mm (based on 1898 to 2024 data) (Bureau of Meteorology 2024).

A summary of rainfall from the start of November through to the end of the sampling event monitoring period (4 December 2024) has been illustrated in **Graph 1** below**.**



Graph 1: November/December 2024 Rainfall at Wodonga (Weather Station 082056)

The majority of surface water samples were collected between 25 and 28 November during this OMP sampling event. It is acknowledged that some surface water samples were collected during the 25 and 26 November, which represented drier conditions compared to the main rain event on the 27 November. These locations ranged between off-base water ways (i.e. Kiewa River and Jack in the Box Creek) to on-base ponds and drains. All sample locations however contained sufficient water for sampling.

Based on the rainfall identified during the sampling period, this sampling event achieved the rainfall trigger event identified in the OMP (Defence 2020b). Therefore, all surface water sampling locations were able to be sampled.

7.2 Groundwater

7.2.1 Access and Condition of Groundwater Monitoring Wells

The groundwater monitoring well network was accessible during the sampling event. No issues with groundwater monitoring well integrity were identified.

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7.2.2 MW357 Survey Results

MW357 was resurveyed during this OMP sampling event, with the results provided in **Appendix G**. These results have been considered as part of this SER, including for the calculation of groundwater flow direction contours.

7.2.3 Groundwater Field Parameters

Groundwater field parameters are presented in **Table C2, Appendix C**. The field parameters were recorded ex-situ with remaining groundwater from the HydraSleeve or bailer following sampling. A summary of the field parameters has been presented in **Table 7.1.** A guide to the parameter descriptions has been provided in **Appendix H**.

Table 7.1: Groundwater Field Parameters Summary

Unit	Parameter	Minimum	Maximum	Comment
Shepparton Colluvium (16 wells)	DO (mg/L)	0.62	5.62	Hypoxic to good aerobic conditions
	EC (µs/cm)	47.16	6581	Fresh to saline water
	ORP (mV)	-177.2^	102.6	Anaerobic to moderately reducing
	Temperature (°C)	19.2	22.2	-
	pH (-)	5.51	7.68^	Slightly acidic to neutral
Shepparton and Coonambidgal Fluvium – Shallow Aquifer (20 wells)	DO (mg/L)	0.79	8.04^	Hypoxic to excellent aerobic conditions
	EC (µs/cm)	96	5201	Fresh to saline water
	ORP (mV)	-353	43.9	Anaerobic to moderately reducing
	Temperature (°C)	17.9	22.5	-
	pH (-)	5.78	7.23	Slightly acidic to neutral
Shepparton and Coonambidgal Fluvium – Intermediate Aquifer (MW009, MW042, MW046_I)	DO (mg/L)	0.88	6.72^	Hypoxic to good aerobic conditions
	EC (µs/cm)	255.5	375.6	Fresh water
	ORP (mV)	-107.4	57.8	Anaerobic to moderately reducing
	Temperature (°C)	20.7	22.3	-
	pH (-)	6.05	6.49	Slightly acidic
Shepparton and Coonambidgal Fluvium – Deep Aquifer (MW046_D, MW350_D)	DO (mg/L)	1.13^		Hypoxic conditions
	EC (µs/cm)	259.4	259.9	Fresh water
	ORP (mV)	-120	56	Anaerobic to moderately reducing
	Temperature (°C)	21.2	23.3	-
	pH (-)	6.11	6.55	Slightly acidic to neutral
Shepparton and Coonambidgal Fluvium – Perched Aquifer (MW056)	DO (mg/L)	3.12		Poor aerobic conditions
	EC (µs/cm)	407.2		Fresh water
	ORP (mV)	-150.1		Anaerobic
	Temperature (°C)	23		-
	pH (-)	6.75		Neutral
Shepparton and Coonambidgal Fluvium# (OTH019)	DO (mg/L)	0.98		Hypoxic conditions
	EC (µs/cm)	409.8		Fresh water
	ORP (mV)	108.1		Moderately reducing
	Temperature (°C)	26.5		-
	pH (-)	6.39		Slightly acidic

Note:

- ^ Unrealistic and erroneous results have been excluded from **Table 7.1**. Excluded results include MW307 with an ORP reading of -4907 mV, MW342 with a pH reading of 9.83, MW012 and MW353 with DO readings of 13.3 and 24.6 mg/L respectively, MW042 with DO reading of 21.9 mg/L, and MW350_D with a DO reading of 8.46 mg/L .
- #: Construction details of OTH019 groundwater well are unknown, and as such has not been assigned an aquifer depth.

7.2.4 Groundwater Field Observations

The following incidental odours were noted during groundwater sampling:

- An organic odour was recorded at one groundwater monitoring well (MW315 in Source Area 2); and
- A slightly musty odour was recorded at one groundwater monitoring well (MW416 in Source Area 6).

The following visual observations were made during groundwater sampling:

- Groundwater samples generally had no or low turbidity except for ten samples from the perched or shallow Shepparton and Coonambidgal Fluvium where low/medium or medium turbidity was recorded (MW029, MW034, MW056, MW304, MW311, MW315, MW321, MW353, MW356, MW357);
- The colour of groundwater samples ranged from clear to light colouring of brown, grey or white;
- Minor foaming was identified in MW321 and MW404 during the 'shake test';
- No sheen or other visual indications of contamination were observed in any of the groundwater samples; and
- Minor sediment within the HydraSleeves^{TM} were identified in four monitoring wells.

7.3 Surface Water

7.3.1 Surface Water Monitoring Access

All surface water monitoring locations were accessible during the sampling event.

7.3.2 Surface Water Field Parameters

Surface water field parameters are presented in **Table C3, Appendix C.** The field parameters were recorded in situ at the time of sampling. A summary of the field parameters has been presented in **Table 7.2.** A guide to the parameter descriptions has been provided in **Appendix H**.

Table 7.2: Surface Water Field Parameters Summary

Water Body	Parameter	Minimum	Maximum	Comment
Jack in the Box Creek (7 locations)	DO (mg/L)	0.6	8.66	Hypoxic to excellent aerobic conditions
	EC (µs/cm)	59.4	144.2	Fresh water
	ORP (mV)	-59.6	51.9	Anaerobic to moderately reducing
	Temperature (°C)	22.4	26.3	-
	pH (-)	#	#	Measurement not collected due to sensor fault.
Kiewa River (4 locations)	DO (mg/L)	5.23	6.82	Good aerobic conditions
	EC (µs/cm)	29.9	34.9	Fresh water
	ORP (mV)	7.4	40.2	Moderately reducing
	Temperature (°C)	21.1	24	-
	pH (-)	7.35	7.35	Neutral. Only one measurement collected due to sensor fault.
Middle Creek	DO (mg/L)		6.3	Good aerobic conditions

Water Body	Parameter	Minimum	Maximum	Comment
(SW393)	EC (µs/cm)	186.7		Fresh water
	ORP (mV)	49.9		Moderately reducing
	Temperature (°C)	21.4		-
	pH (-)	#		Measurement not collected due to sensor fault.
Kiewa River Floodplain Oxbow (11 locations)	DO (mg/L)	0.43	9.7	Hypoxic to excellent aerobic conditions
	EC (µs/cm)	71.4	451.8	Fresh water
	ORP (mV)	-147.2	90.9	Anaerobic to moderately reducing
	Temperature (°C)	21.4	27.1	-
	pH (-)	6.9	8	Neutral
Ornamental Pond (SW346, SW349, SW355)	DO (mg/L)	4.94	6.37	Poor to good aerobic conditions
	EC (µs/cm)	50.9	96.7	Fresh water
	ORP (mV)	390.9	585.3	Oxidising to highly oxidising
	Temperature (°C)	31.0		-
	pH (-)	7.4	7.8	Neutral
Unnamed Creek (SW409, SW462)	DO (mg/L)	2.02	4	Poor aerobic conditions
	EC (µs/cm)	51.7	200.7	Fresh water
	ORP (mV)	24.1	36.4	Moderately reducing
	Temperature (°C)	23.1	24	-
	pH (-)	#	#	Measurement not collected due to sensor fault.
Dam (5 locations)	DO (mg/L)	2.1	6.49	Poor to good aerobic conditions
	EC (µs/cm)	41.3	268.2	Fresh water
	ORP (mV)	-149.5	-8.6	Anaerobic
	Temperature (°C)	21.8	29.7	-
	pH (-)	5.7	8.62	Slightly acidic to slightly alkaline
Drain (20 locations)	DO (mg/L)	1.91	8.16	Hypoxic to excellent aerobic conditions
	EC (µs/cm)	16.3	757	Fresh water
	ORP (mV)	-111	63.1	Anaerobic to moderately reducing
	Temperature (°C)	21.0	32.6	-
	pH (-)	5.23	7.59	Acidic to neutral

Note:

- #: Measurements not collected due to sensor fault.

7.3.3 Surface Water Field Observations

Flow conditions in the surface water body were recorded as follows:

- Stagnant (24 locations);
- Gentle flow (20 locations); and
- Moderate flow (9 locations).

While it is acknowledged that the sampling of flowing water is generally more representative of PFAS concentrations within a water body, it is noted that the majority of locations which identified 'stagnant' flow conditions were waterbodies which do not exhibit flow (i.e. dams, ponds and oxbows). The sampling of

stagnant conditions from these water bodies is consistent with water flow observations from previous sampling events.

Table 7.3 Summary of Olfactory and Visual Observations

Olfactory/Visual	Description	Surface sampling location	Surface water body
Olfactory	Organic odour	SW310, SW340	On-base drainage channels
		SW434	Jack in the Box Creek
	Minor musty odour	SW332	On-base drainage channel
Visual	Organics present	SW388	Off-base drainage channel
		SW424, SW431, SW463	Jack in the Box Creek
	Slight sheen	SW427, SW431, SW434	Jack in the Box Creek

Other visual observations during surface water sampling included:

- Two thirds of surface water samples had no or low turbidity. For one third of surface water samples a medium to high turbidity was recorded;
- The colour of surface water samples ranged from clear (four samples) over a light colouring (21 samples) to distinct brown (milky brown to dark brown in 26 samples) and green or yellow (two samples);
- No foaming or other visual indications of contamination were observed in any of the surface water samples.

8. Results

8.1 Groundwater elevations and inferred flow direction

Groundwater gauging data has been presented in **Table C1**, **Appendix C.** Groundwater contours for the shallow Shepparton Colluvium as well as the shallow Shepparton and Coonambidgal Fluvium, including groundwater elevations, are provided as **Appendix A, Figure 6**.

Groundwater contours for the perched Shepparton Colluvium and the intermediate and deep Shepparton and Cooambidgal Fluvium have not been calculated, owing to the limited number of wells (i.e. <3) being installed in the aquifer. It is noted however that the intermediate and deep Shepparton and Cooambidgal Fluvium aquifers flow to the northeast towards the Kiewa River based on information from previous investigations, with the SWLs from this OMP monitoring round being consistent with previous data.

SWLs are measured in the field as metres below top of casing (mBTOC) and are later converted into a relative level to determine groundwater flow directions.

Groundwater elevations in the shallow Shepparton Colluvium ranged between 151.43 and 167.12 m AHD. The groundwater flow direction was inferred to be west and north westerly flow towards Jack in the Box Creek, consistent with previous rounds of groundwater monitoring.

Groundwater elevations in the shallow Shepparton and Coonambidgal Fluvium ranged between 155.14 and 163.47 m AHD. The groundwater flow direction was inferred to be easterly flow towards the Kiewa River, consistent with previous rounds of groundwater monitoring.

8.2 Analytical results

8.2.1 Groundwater analytical results

Groundwater analytical results for the November/December 2024 sampling event have been presented in **Table B1**, **Appendix B**. The groundwater analytical results have been compared against the adopted screening criteria, in summary:

- Concentrations of PFOS in 28 out of 43 samples (65%) exceeded the Freshwater (95% species protection) screening criterion of 0.13 µg/L. In 38 samples (88%) that had concentrations above LOR, PFOS concentrations exceeded the screening criterion for Freshwater (99% species protection) of 0.00023 µg/L. It should be noted that the Freshwater (99% species protection) screening criteria for PFOS is below the LOR used for this investigation and as such it is unknown whether the non-detect concentrations exceed this criterion;
- Concentrations of sum of PFOS+PFHxS in 33 out of 43 samples (77%) exceeded the Drinking water screening criterion of 0.07 µg/L. 17 samples (40%) exceeded the screening criterion for Recreational Water of 2.0 µg/L; and
- Concentrations of PFOA in 1 out of 43 samples exceeded the Freshwater (99% species protection) screening criterion of 19.0 µg/L. Two samples (5%) exceeded the Recreational Water criterion of 10.0 µg/L, and 7 samples (16%) exceeded the Drinking Water criterion of 0.56 µg/L for this analyte.

Table 8.1 below presents a summary of notable deviations between groundwater analytical results reported for the November/December 2024 sampling event and available historical data.

Table 8.1: Summary of Deviation from Historical Groundwater Data

Sample Location	Nov/Dec 2024 Sum of PFOS+PFHxS	Historical Sum of PFOS+PFHxS Range	Comment
MW051^	3.71 µg/L	<0.01 - 0.16 µg/L	Sample location is positioned within Source Area 6. The Nov/Dec 2024 sum of PFOS+PFHxS result is the highest result recorded within this Source Area to date. Other PFAS compounds also showed increases at this location in the recent sampling event. Revision of field notes and recent activities in this area of the base did not identify changed conditions which would cause the elevated result. Downgradient on-base wells including MW323 and MW311 were within historical ranges and delineate the concentration identified at MW051 to within the base.
MW353^	43.0 µg/L	4.93 - 18.80 µg/L	Sample location is positioned in East Bandiana, halfway between Source Area 13 and the base boundary. The Nov/Dec 2024 sum of PFOS+PFHxS result is the highest recorded at this location to date. Other PFAS compounds also showed increases in the recent sampling event. Revision of field notes and recent activities in this area of the base did not identify changed conditions which would cause the elevated result. Downgradient on-base well MW016 (which is screened within the same aquifer) was within historical ranges and delineate the concentration identified at MW353 to within the base.
MW416^	1.18 µg/L	<0.01 - 0.05 µg/L	Sample location is positioned within Source Area 6. The Nov/Dec 2024 sum of PFHxS +PFOS result is the highest recorded at this location to date. Other PFAS compounds also showed increases in the recent sampling event. Revision of field notes and recent activities in this area of the base did not identify changed conditions which would cause the elevated result. Downgradient on-base wells including MW323 and MW311 were within historical ranges and delineate the concentration identified at MW416 to within the base.

Note:

- ^ Samples were re-analysed by the lab and confirmed as being comparable to the initial result. Concentrations shown in this table along with the analytical results in **Appendix B** are the results of the sample re-run.

Increases in PFAS concentrations from the previous OMP sampling round in April 2024 have been identified at several other groundwater sampling locations including the following:

- On-base: MW016, MW018, MW020, MW034, MW043, MW046_I, MW056, MW304, MW307, MW321, MW342, MW345, MW350_D, MW352 and MW354; and
- Off-base: MW357, MW360, MW361 and OTH019.

The increases identified in the dot points above (i.e. excluding those listed in **Table 8.1**), are only considered minor (i.e. not orders of magnitude changes) and are within historic ranges. A full review and discussion of the above identified increases in the context of the overall dataset and Conceptual Site Model (CSM) will be provided in the Ongoing Monitoring Report (OMR) for the 2024 period.

8.2.2 Surface Water Analytical Results

Surface water analytical results for the November/December 2024 sampling event have been presented in **Table B2**, **Appendix B.** The surface water analytical results have been compared against the adopted screening criteria, in summary:

- Concentrations of PFOS in 30 out of 53 samples (57% of samples) exceeded Freshwater (95% species protection) criteria of 0.13 µg/L. In 47 samples (89% of samples) that had concentrations above LOR, PFOS concentrations exceeded the screening criterion for Freshwater (99% species protection) of 0.00023 µg/L. It should be noted that the Freshwater (99% species protection) screening criteria for PFOS is below the LOR used for this investigation and as such it is unknown whether the non-detect concentrations exceed this criterion;
- Concentrations of sum of PFOS+PFHxS in 40 out of 53 samples (75%) exceeded the Drinking Water criterion of 0.07 µg/L. Ten samples (19%) exceeded the Recreational Water screening criterion of 2.0 µg/L; and
- Concentrations of PFOA in 3 out of 53 samples (6%) exceeded the Drinking Water screening criterion of 0.56 µg/L.

The following **Table 8.2** presents a summary of notable deviations between surface water analytical results reported for the November/December 2024 sampling event and available historical data.

Table 8.2: Summary of Deviation from Historical Surface Water Data

Sample Location	Nov/Dec 2024 Sum of PFOS+PFHxS	Historical Sum of PFOS+PFHxS Range	Comment
SW313^	381.3 ug/L	3.33 - 6.10 ug/L	Located within the earthen bund in Source Area 1. JBS&G completed test pitting within the bund (Source Area 1 and 7 Further Investigation (JBS&G 2025)) approximately one month prior to the OMP sampling and this disturbance of the soil may have resulted in higher PFAS concentrations in surface water than have previously been recorded during the OMP.
SW332^	22.6 ug/L	0.01 - 4.30 ug/L	Located immediately to the west of Source Area 5 and is the upper most sampling location within the sub-catchment. Review of the field notes and recent activities in the area did not provide an explanation for the elevated result, although it is noted that road re-grading works within the Closed Training Area occurred prior to sampling which may have disturbed roadway and associated drainage within the area. Downgradient on-base surface water sampling locations including SW323 and SW322 were within historical ranges and delineate the concentration identified at SW332 to within the base.

Note:

- ^ Samples were re-analysed by the lab and confirmed as being comparable to the initial result. Concentrations shown in this table along with the analytical results in Appendix B are the results of the sample re-run.

Increases in PFAS concentrations from the previous OMP sampling round in April 2024 have been identified at several other surface water sampling locations including the following:

- On-base: SW311, SW316, SW323, SW326, SW333, SW336, SW338, SW340, SW346, SW349, SW355, SW375 and SW379; and
- Off-base: SW396, SW412, SW424, SW427, SW430, SW431, SW432, SW434, SW471 and SW487.

The increases identified in the dot points above (i.e. excluding those listed in **Table 8.2**), are only considered minor (i.e. not orders of magnitude changes) and are within historic ranges. A full review and discussion of the above identified increases in the context of the overall dataset and CSM will be provided in the OMR for the 2024 period.

9. Conclusions

The November/December 2024 sampling event was completed in general accordance with the SAQP (JBS&G 2024) and the OMP. The observations, information and data collected as part of the sampling event have been documented in this SER and key findings have been summarised in the table below.

A full review and discussion of the results obtained as part of this SER in the context of the overall dataset and CSM will be provided in the OMR for the 2024 period.

Table 9.1: Summary of November/December 2024 Sampling Event

Aspect	Detail	Recommended Action
SAQP	This OMP round was completed with general accordance with the SAQP (JBS&G 2024) with the exception of the deviations discussed in **Section 3** including: • A slight delay in the timing of the sampling event; • Groundwater gauging undertaken over an extended period, rather than a consolidated event; • Minor variations to the standard sampling technique including sampling one well with bailer instead of HydraSleeve, and retrieval of the HydraSleeve just short of the required 24-hour deployment period; • Field equipment issues resulting in missing water parameter information; and • One monitoring location could not be sampled as the well was found dry.	All reasonable effort will be made to complete the next sampling event in general accordance with the prepared SAQP.
Screening criteria	The screening criteria identified in **Section 5** were adopted in consideration of current guidance.	Nil
Groundwater gauging	The groundwater flow directions inferred from groundwater gauging data were consistent with previous monitoring rounds.	Groundwater locations will be gauged again during the next scheduled sampling event to continue monitoring of the groundwater flow direction as per OMP.
Groundwater sampling program	A total of 43 primary groundwater samples were collected. Concentrations of PFOS, sum of PFOS+PFHxS and PFOA were generally consistent with previous monitoring rounds, with the exception of results from MW051, MW353 and MW416, which had results above the historic range. These increases have not been attributed to a cause, however, they are located on-base and down-gradient wells are within historical ranges.	Groundwater locations will be sampled again during the next scheduled sampling event to continue monitoring of the groundwater PFAS concentrations as per OMP.
Surface water sampling program	A total of 53 primary surface water samples were collected. Concentrations of PFOS, sum of PFOS+PFHxS and PFOA were generally consistent with previous monitoring rounds, with the exception of SW313 and SW332, which had results above the historic range. These results were considered likely to be attributable to recent soil disturbance activities	Surface water locations will be sampled again during the next scheduled sampling event to continue monitoring of the surface water PFAS concentrations as per OMP.

Aspect	Detail	Recommended Action
	and unlikely to pose an ongoing issue, with results anticipated to return to within historical ranges.	
Next scheduled event	The next OMP event is scheduled for May 2025.	Nil

10. References

10.1 Previous Investigation Reports

Bandiana Military Area, PFAS Management Area Plan. Document Number 1777738-153-R-RevA. November 2020. (Defence 2020a);

Bandiana Military Area, PFAS Ongoing Monitoring Plan. Document Number 177738-153-R-RevA. November 2020. (Defence 2020b);

Human Health and Ecological Risk Assessment, Bandiana Military Area. Document Number 1777738-150-R-RevB. November 2020 (Golder 2020);

Bandiana Military Area – PFAS Ongoing Monitoring Plan (OMP) Sampling and Analysis Quality Plan (SAQP). Document number 61395/163,009 – Rev0. 22 November 2024. (JBS&G 2024); and

Source Area 1 and 7 Further Investigation – PFAS Management Area Plan (PMAP) Delivery at Bandiana Military Area. Document number 61395/162,538 Rev B. JBS&G Australia Pty Ltd. 24 January 2025. (JBS&G 2025).

10.2 Standards and Guidelines

Water Quality Guidelines. Australian and New Zealand Environment and Conservation Council (ANZECC) and Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ). 2000. (ANZECC and ARMCANZ 2000);

Australian and New Zealand Guidelines for Fresh and Marine Water Quality. 2018. (ANZG 2018).

AS 4482.1-2005, Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soils, Part 1 - Non-volatile and Semi-volatile Compounds (withdrawn as pending revision, referred to for 'state of knowledge'). (AS 2005);

Australian/New Zealand Standard AS/NZS 5667.6:1998 Water Quality – Sampling, Part 6: Guidance on Sampling Rivers and Streams. (AS/NZS 1998);

Daily Rainfall – Wodonga. Retrieved from http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p_nccObsCode=136&p_display_type=dailyDataFile&p_startYear=2024&p_c=-1346684518&p_stn_num=082056 on 23 January 2025. (Bureau of Meteorology 2024).

Ongoing Monitoring Program Reporting Guidance, dated 29 February 2024. (Defence 2024);

Pollution Prevention Management Manual – Annex 1L: Pollution Prevention Guidance – Routine Water Quality Monitoring. (Defence 2019);

Defence Contamination Management Manual (DCMM), Annex L – Data Management, August 2019, Amended June 2021. (Defence 2021);

Groundwater Sampling Guidelines, Publication 669.1, February 2022. (EPA 2022);

Sampling and Analysis of Waters, Wastewaters, Soils and Wastes, Publication 701, June 2009. (EPA 2009);

PFAS National Environmental Management Plan (NEMP) Version 2.0, January 2020. (HEPA 2020);

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

Guidance on Per and Polyfluoroalkyl Substances (PFAS) in Recreational Water, August 2019. (NHMRC 2019);

Sampling Design Part 1 – Application, Contaminated Land Guidelines. August 2022. (NSW EPA 2022a);

Sampling Design Part 2 – Interpretation, Contaminated Land Guidelines. August 2022. (NSW EPA 2022b);

Guidance for the Data Quality Objectives Process (EPA QA/G-4). (USEPA 2006);

Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8). (USEPA 2002);

Interim Guideline on the Assessment and Management of Perfluoroalkyl and Polyfluoroalkyl Substances, WA DER. (WA DER, 2017); and

Guidelines for Drinking-Water Quality. World Health Organisation (WHO). 21 March 2022. (WHO 2022).

11. Limitations

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

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

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

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

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

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Appendix A Figures

Figures included are as follows:

- Figure 1: Site Location Plan;
- Figure 2: Source Areas and Contaminated Sites Record (CSR) IDs;
- Figure 3: Surface Water Divide and Pathways;
- Figure 4: OMP Groundwater Sample Locations;
- Figure 5A/B: OMP Surface Water Sample Locations;
- Figure 6: OMP December 2024 Groundwater Contours;
- Figure 7: Groundwater Sum of PFOS+PFHxS Results Summary (Nov/Dec 2024); and
- Figure 8A/B: Surface Water Sum of PFOS+PFHxS Results Summary (Nov/Dec 2024).

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Legend

- Management Area
- Bandiana Military Area
- Watercourse

JBS&G

Job No: 61395

Client: Department of Defence

Version: Final | Date: 5-May-2025

[redacted]

Scale 1:35,000

0 500 1,000

metres

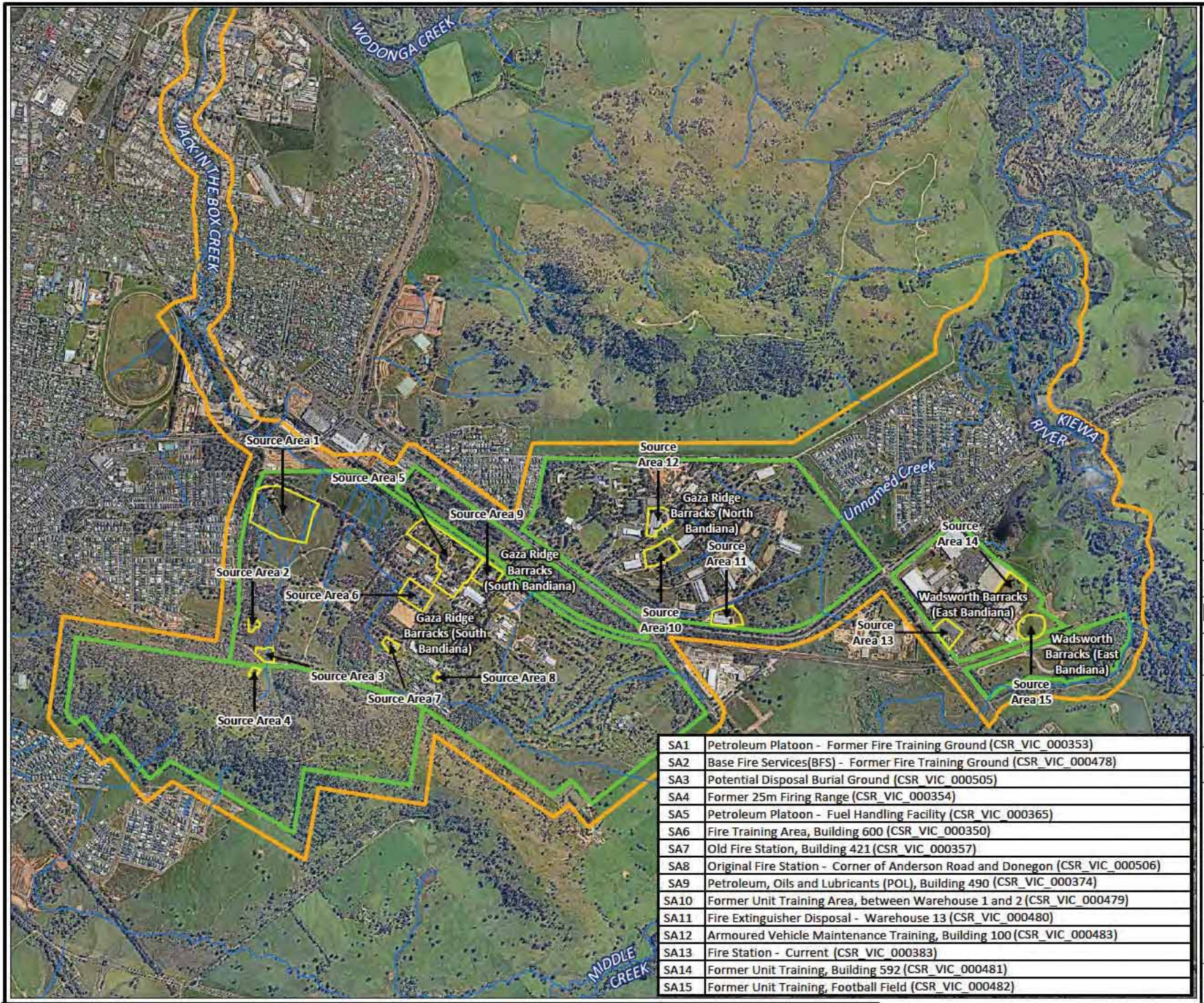
Coord. Sys. GDA 1994 MGA Zone 55

Bandiana Military Area

SITE LOCATION PLAN

FIGURE 1

[redacted]



SA1	Petroleum Platoon - Former Fire Training Ground (CSR_VIC_000353)
SA2	Base Fire Services(BFS) - Former Fire Training Ground (CSR_VIC_000478)
SA3	Potential Disposal Burial Ground (CSR_VIC_000505)
SA4	Former 25m Firing Range (CSR_VIC_000354)
SA5	Petroleum Platoon - Fuel Handling Facility (CSR_VIC_000365)
SA6	Fire Training Area, Building 600 (CSR_VIC_000350)
SA7	Old Fire Station, Building 421 (CSR_VIC_000357)
SA8	Original Fire Station - Corner of Anderson Road and Donegon (CSR_VIC_000506)
SA9	Petroleum, Oils and Lubricants (POL), Building 490 (CSR_VIC_000374)
SA10	Former Unit Training Area, between Warehouse 1 and 2 (CSR_VIC_000479)
SA11	Fire Extinguisher Disposal - Warehouse 13 (CSR_VIC_000480)
SA12	Armoured Vehicle Maintenance Training, Building 100 (CSR_VIC_000483)
SA13	Fire Station - Current (CSR_VIC_000383)
SA14	Former Unit Training, Building 592 (CSR_VIC_000481)
SA15	Former Unit Training, Football Field (CSR_VIC_000482)

Legend

- Management Area
- Bandiana Military Area
- Source Areas
- Watercourse

JBS&G

Job No: 61395

Client: Department of Defence

Version: Final | Date: 5-May-2025

[redacted]

Scale 1:30,000

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metres

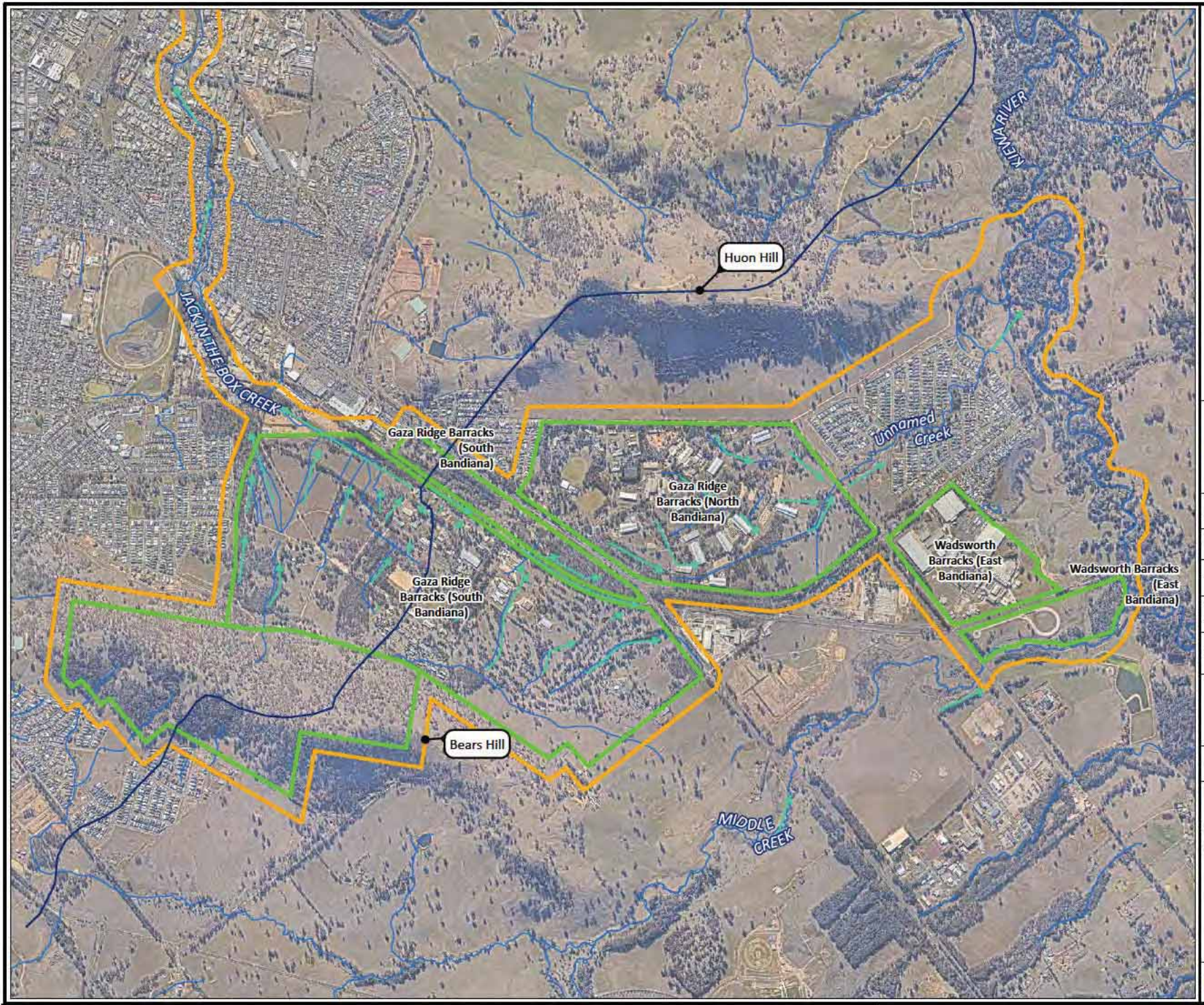
Coord. Sys. GDA 1994 MGA Zone 55

Bandiana Military Area

SOURCE AREAS AND CONTAMINATED SITES RECORD (CSR) IDs

FIGURE 2

[redacted]



Legend

- Management Area
- Bandiana Military Area
- Stormwater Divide
- Watercourse
- Drainage Flow Direction

JBS&G

Job No: 61395

Client: Department of Defence

Version: Final | Date: 5-May-2025

[redacted]

Scale 1:30,000

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metres

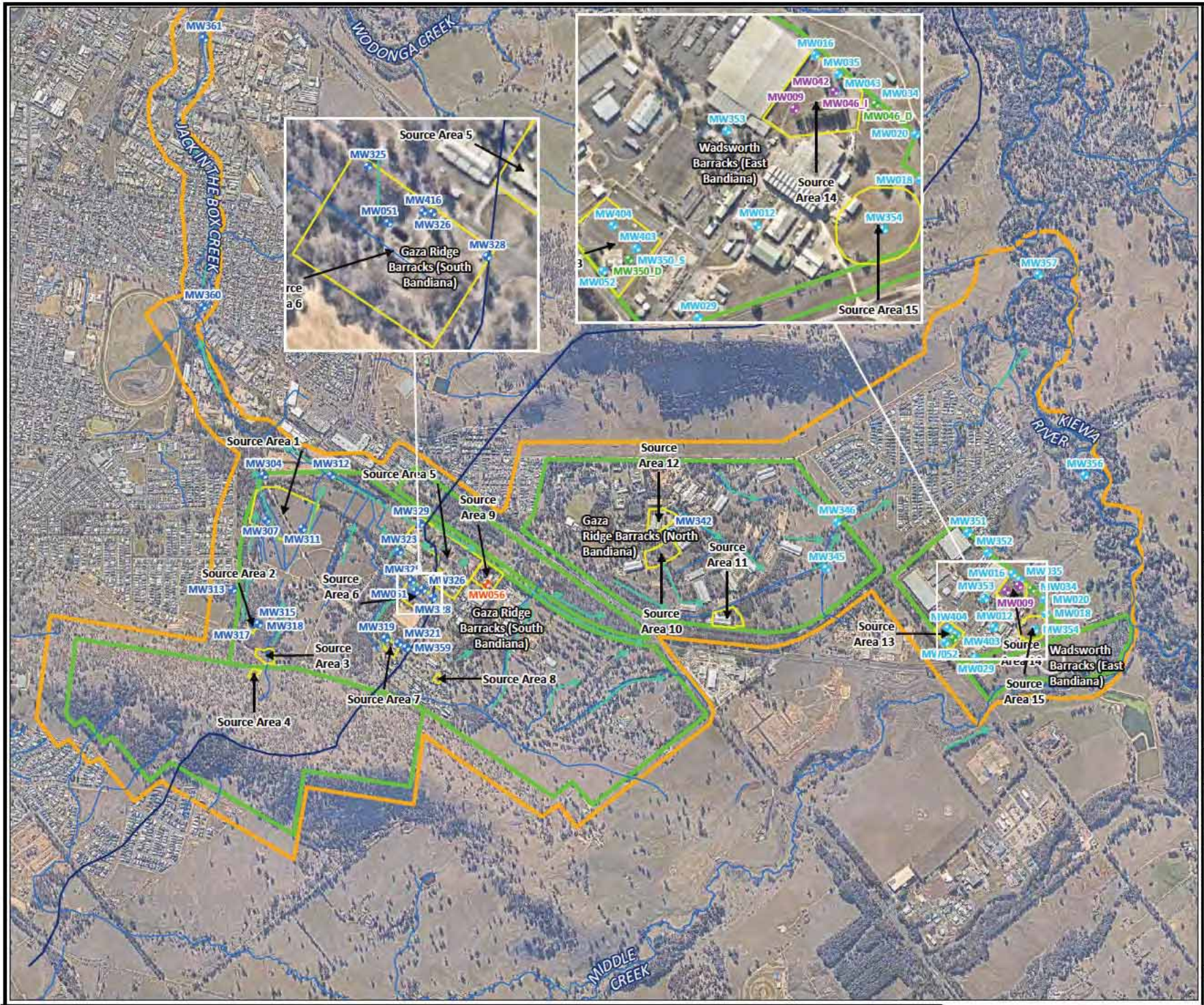
Coord. Sys. GDA 1994 MGA Zone 55

Bandiana Military Area

SURFACE WATER DIVIDE AND PATHWAYS

FIGURE 3

[redacted]



Legend

- Management Area
- Bandiana Military Area
- Source Areas
- Stormwater Divide
- Watercourse
- Drainage Flow Direction
- Shepparton Colluvium - Shallow Aquifer
- Shepparton and Coonambidgal Fluvium -Shallow Aquifer
- Shepparton and Coonambidgal Fluvium -Intermediate Aquifer
- Shepparton and Coonambidgal Fluvium -Deep Aquifer
- Perched Water

JBS&G

Job No: 61395

Client: Department of Defence

Version: Final | Date: 5-May-2025

[redacted]

Scale 1:30,000

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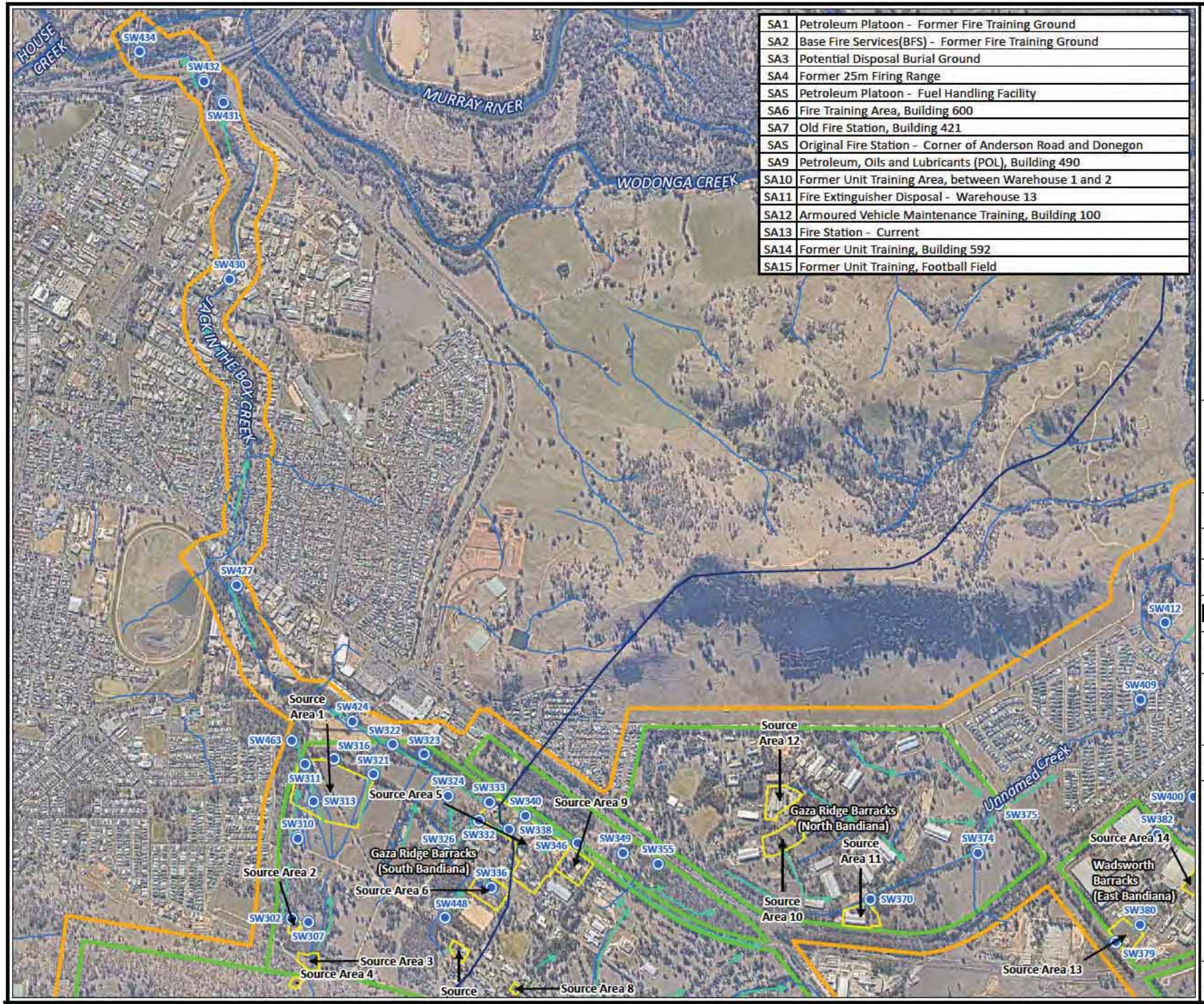
metres

Coord. Sys. GDA 1994 MGA Zone 55

Bandiana Military Area

OMP GROUNDWATER SAMPLE LOCATIONS

FIGURE 4



SA1	Petroleum Platoon - Former Fire Training Ground
SA2	Base Fire Services(BFS) - Former Fire Training Ground
SA3	Potential Disposal Burial Ground
SA4	Former 25m Firing Range
SAS	Petroleum Platoon - Fuel Handling Facility
SA6	Fire Training Area, Building 600
SA7	Old Fire Station, Building 421
SAS	Original Fire Station - Corner of Anderson Road and Donegon
SA9	Petroleum, Oils and Lubricants (POL), Building 490
SA10	Former Unit Training Area, between Warehouse 1 and 2
SA11	Fire Extinguisher Disposal - Warehouse 13
SA12	Armoured Vehicle Maintenance Training, Building 100
SA13	Fire Station - Current
SA14	Former Unit Training, Building 592
SA15	Former Unit Training, Football Field

Legend

- Management Area
- Bandiana Military Area
- Source Areas
- Stormwater Divide
- Watercourse
- Drainage Flow Direction
- Surface Water Location

JBS&G

Job No: 61395

Client: Department of Defence

Version: Final | Date: 5-May-2025

[redacted]

Scale 1:25,000

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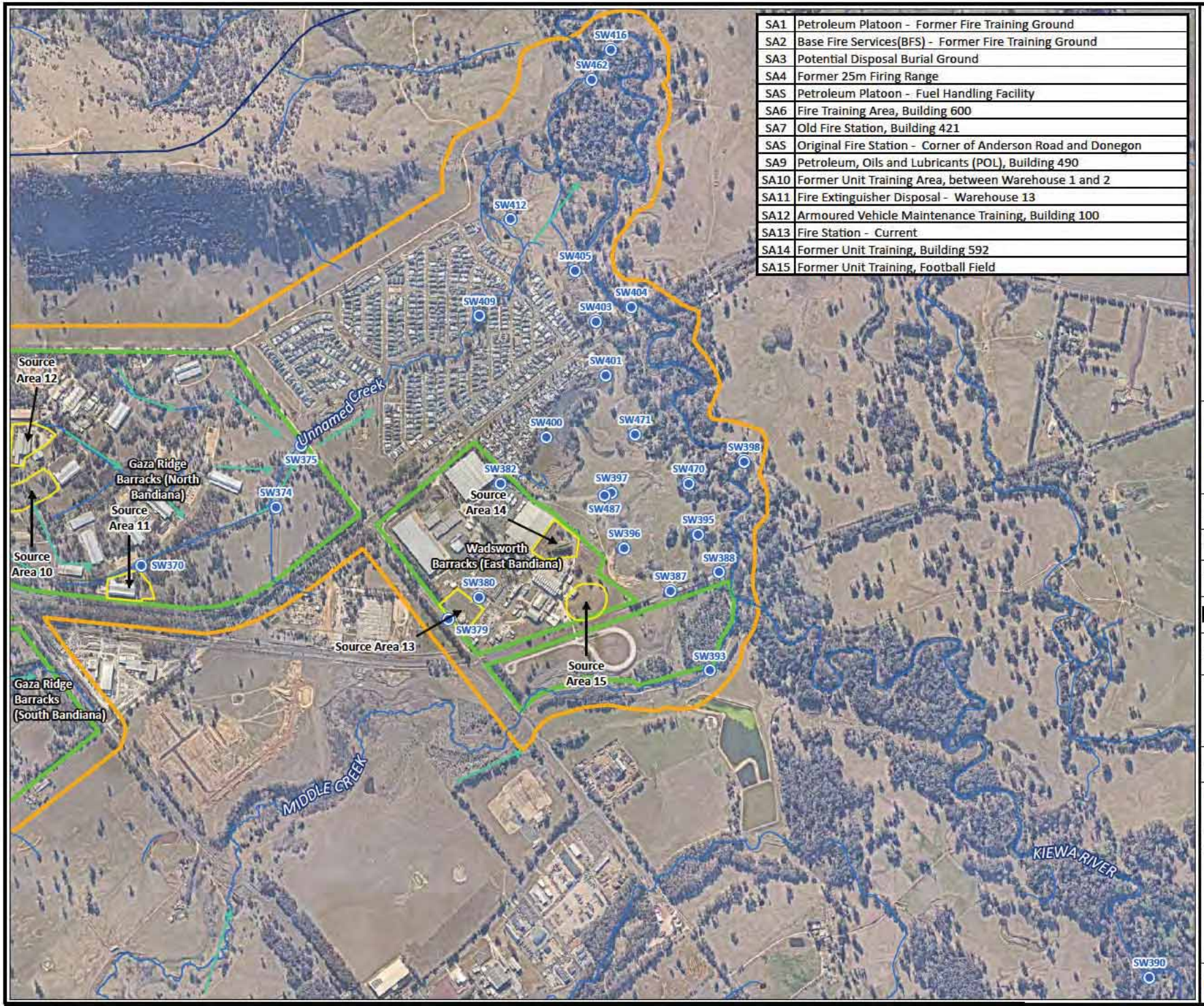
metres

Coord. Sys. GDA 1994 MGA Zone 55

Bandiana Military Area

OMP SURFACE WATER SAMPLE LOCATIONS

FIGURE 5A



SA1	Petroleum Platoon - Former Fire Training Ground
SA2	Base Fire Services(BFS) - Former Fire Training Ground
SA3	Potential Disposal Burial Ground
SA4	Former 25m Firing Range
SAS	Petroleum Platoon - Fuel Handling Facility
SA6	Fire Training Area, Building 600
SA7	Old Fire Station, Building 421
SAS	Original Fire Station - Corner of Anderson Road and Donegon
SA9	Petroleum, Oils and Lubricants (POL), Building 490
SA10	Former Unit Training Area, between Warehouse 1 and 2
SA11	Fire Extinguisher Disposal - Warehouse 13
SA12	Armoured Vehicle Maintenance Training, Building 100
SA13	Fire Station - Current
SA14	Former Unit Training, Building 592
SA15	Former Unit Training, Football Field

Legend

- Management Area
- Bandiana Military Area
- Source Areas
- Stormwater Divide
- Watercourse
- Drainage Flow Direction
- Surface Water Location

JBS&G

Job No: 61395

Client: Department of Defence

Version: Final | Date: 5-May-2025

[redacted]

Scale 1:20,000

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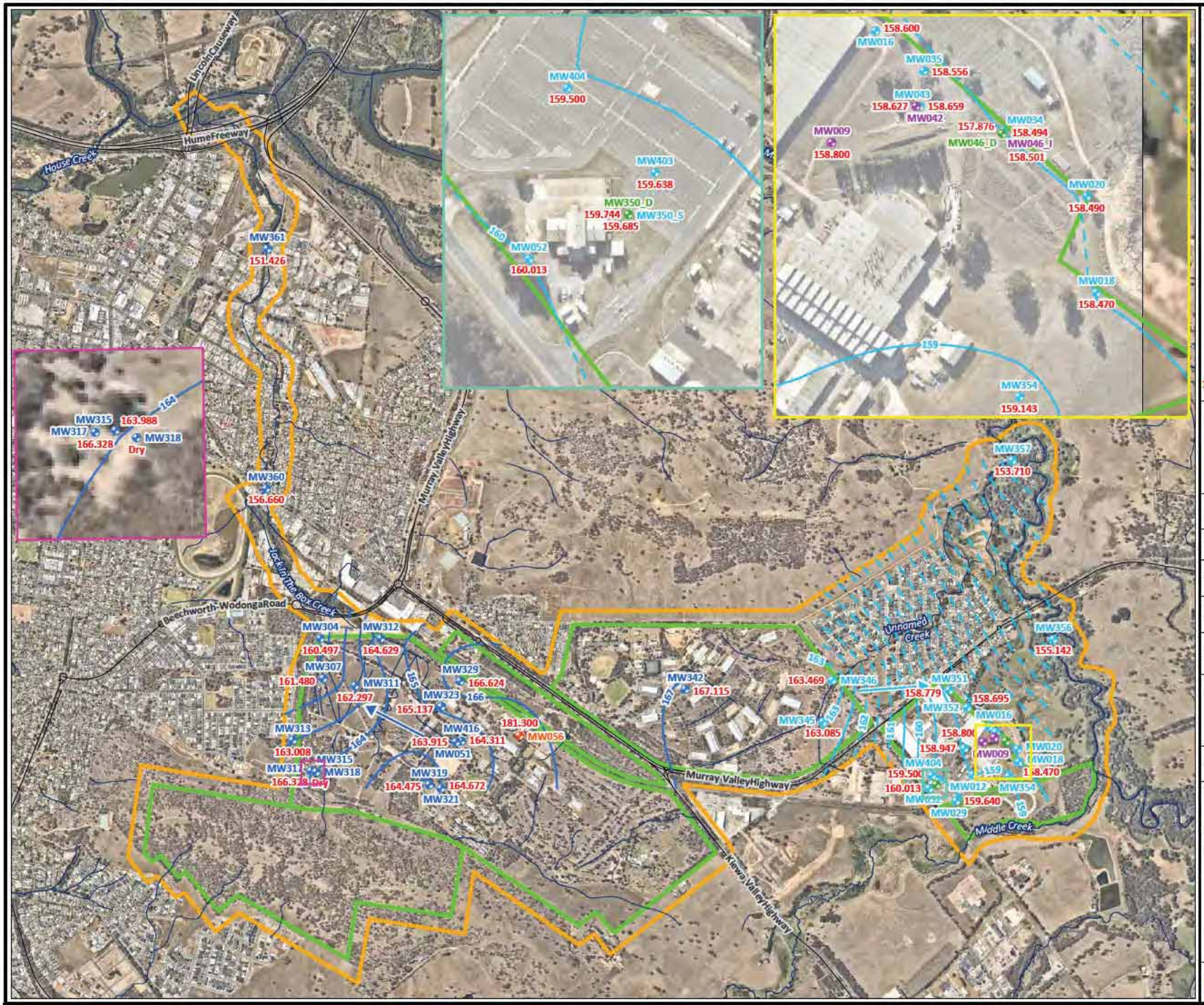
metres

Coord. Sys. GDA 1994 MGA Zone 55

Bandiana Military Area

OMP SURFACE WATER SAMPLE LOCATIONS

FIGURE 5B



Legend

- Management Area
- Bandiana Military Area
- Roads
- Watercourse
- Inferred Shepparton Colluvium - Shallow Aquifer On Base Contour
- Inferred Shepparton Colluvium - Shallow Aquifer Off Base Contour
- Inferred Shepparton and Coonambidgal Fluvium - Shallow Aquifer On Base Contour
- Inferred Shepparton and Coonambidgal Fluvium - Shallow Aquifer Off Base Contour
- Inferred Shepparton Colluvium - Shallow Aquifer Flow Direction
- Inferred Shepparton and Coonambidgal Fluvium - Shallow Aquifer Flow Direction
- Shepparton Colluvium - Shallow Aquifer
- Shepparton and Coonambidgal Fluvium - Shallow Aquifer
- Shepparton and Coonambidgal Fluvium - Intermediate Aquifer
- Shepparton and Coonambidgal Fluvium - Deep Aquifer
- Shepparton Colluvium - Perched Aquifer
- 159.143 Standing Water Level (mAHD)

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[redacted]

Scale 1:33,500

0 500 1,000
metres

Coord. Sys. GDA 1994 MGA Zone 55

Bandiana Military Area

OMP DECEMBER 2024 GROUNDWATER CONTOURS

FIGURE 6



Legend

- Management Area
- Bandiana Military Area
- Source Areas
- Stormwater Divide
- Watercourse
- Drainage Flow Direction

Sum of PFHxS+PFOS Concentrations

- Below LOR
- LOR to 0.07 µg/L
- 0.07 to 0.7µg/L
- 0.7 to 7 µg/L
- 7 to 70 µg/L
- >70 µg/L

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Job No: 61395

Client: Department of Defence

Version: Final | Date: 5-May-2025

[redacted]

Scale 1:30,000

0 500 1,000

metres

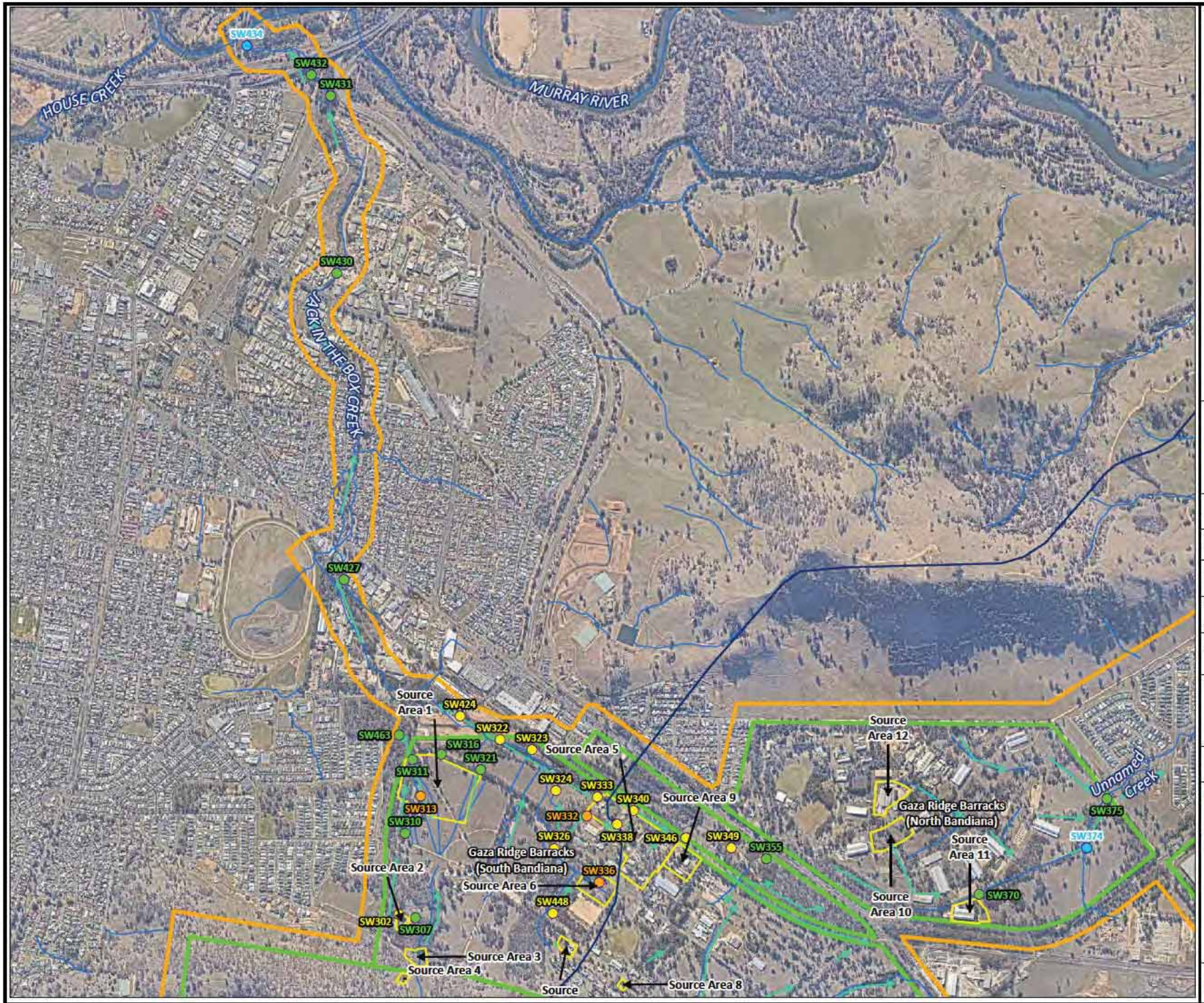
Coord. Sys. GDA 1994 MGA Zone 55

Bandiana Military Area

GROUNDWATER SUM OF PFOS +PFHxS RESULTS SUMMARY (NOV/ DEC 2024)

FIGURE 7

[redacted]



Legend

- Management Area
- Bandiana Military Area
- Source Areas
- Stormwater Divide
- Watercourse
- Drainage Flow Direction

Sum of PFHxS+PFOS Concentrations

- LOR to 0.07µg/L
- 0.07 to 0.7µg/L
- 0.7 to 7µg/L
- 7 to 70µg/L

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Client: Department of Defence

Version: Final | Date: 5-May-2025

[redacted]

Scale 1:25,000

0 400 800

metres

Coord. Sys. GDA 1994 MGA Zone 55

Bandiana Military Area

SURFACE WATER SUM OF PFOS+PFHxS RESULTS SUMMARY (NOV/DEC 2024)

FIGURE 8A



Legend

- Management Area
- Bandiana Military Area
- Source Areas
- Stormwater Divide
- Watercourse
- Drainage Flow Direction

Sum of PFHxS+PFOS Concentrations

- Below LOR
- LOR to 0.07µg/L
- 0.07 to 0.7µg/L
- 0.7 to 7µg/L
- 7 to 70µg/L

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[redacted]

Scale 1:18,000

0 300 600

metres

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Bandiana Military Area

SURFACE WATER SUM OF PFOS+PFHxS RESULTS SUMMARY (NOV/DEC 2024)

FIGURE 8B

[redacted]

Appendix B Analytical Results Tables

Tables provided are as follows:

- Table B1: Nov/Dec 2024 OMP Sampling Event: Groundwater Analytical Results; and
- Table B2: Nov/Dec 2024 OMP Sampling Event: Surface Water Analytical Results.

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Table B1: Nov/Dec 2024 OMP Sampling Event: Groundwater Analytical Results

				PFAS			PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids								
				Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of PFAS	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				0.001	0.005	0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
PFAS NEMP 2020 Drinking Water				0.07														0.56						
PFAS NEMP 2020 Freshwater 95%											0.13							220						
PFAS NEMP 2020 Freshwater 99%											0.00023							19						
PFAS NEMP 2020 Recreational Water				2														10						
Field ID	**Location Code**	**Date**	**Lab Report Number**																					
0445E_MW009_241203	MW009	03 Dec 2024	1169993	5.2	6.4	7.16	0.27	0.44	2.0	0.18	3.2	<0.01	<0.01	0.08	0.12	0.53	0.07	0.13	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW012_241203	MW012	03 Dec 2024	1169993	0.12	0.13	0.13	0.01	<0.01	0.09	<0.01	0.03	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW016_241203	MW016	03 Dec 2024	1169993	10.4	12.88	14.05	0.51	0.67	3.9	0.29	6.5	<0.01	<0.01	0.11	0.20	1.1	0.17	0.39	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW018_241128	MW018	28 Nov 2024	1166588	1.16	1.24	1.36	0.07	0.07	0.53	0.02	0.63	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW020_241203	MW020	03 Dec 2024	1169993	3.3	3.7	3.93	0.07	0.12	1.7	0.08	1.6	<0.01	<0.01	<0.05	0.04	0.20	0.02	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW029_241203	MW029	03 Dec 2024	1169993	0.59	1.12	1.22	0.07	0.08	0.38	<0.01	0.21	<0.01	<0.01	<0.05	0.12	0.26	0.05	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW034_241128	MW034	28 Nov 2024	1166588	1.76	1.96	2.08	0.05	0.06	0.56	0.04	1.2	<0.01	<0.01	<0.05	0.02	0.09	0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW035_241203	MW035	03 Dec 2024	1169993	13.8	18.79	20.91	1.1	0.98	6.6	0.63	7.2	<0.01	<0.01	0.30	0.54	1.8	0.32	0.73	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW042_241204	MW042	04 Dec 2024	1169993	11.6	15.27	16.86	0.69	0.90	4.9	0.40	6.7	<0.01	<0.01	0.19	0.34	1.6	0.21	0.47	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW043_241203	MW043	03 Dec 2024	1169993	14	18.48	20.41	0.84	1.1	5.8	0.46	8.2	<0.01	<0.01	0.23	0.44	1.9	0.26	0.56	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW046D_241128	MW046	28 Nov 2024	1166588	4.2	4.77	5.09	0.12	0.18	1.6	0.09	2.6	<0.01	<0.01	<0.05	0.06	0.29	0.02	0.08	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW046I_241128	MW046	28 Nov 2024	1166588	5	5.59	5.91	0.12	0.18	1.8	0.09	3.2	<0.01	<0.01	<0.05	0.06	0.30	0.03	0.08	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_MW051_241129	MW051	29 Nov 2024	1166588	3.71	5.32	5.7	0.24	0.13	0.71	0.06	3	0.01	<0.01	0.25	0.30	0.60	0.07	0.15	0.03	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW052_241203	MW052	03 Dec 2024	1169993	6	8.28	9.15	0.48	0.52	2.5	0.13	3.5	<0.01	<0.01	0.10	0.16	1.1	0.21	0.23	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_MW056_241204	MW056	04 Dec 2024	1169993	1.86	2.16	2.28	0.06	0.09	0.46	0.03	1.4	<0.01	<0.01	<0.05	0.02	0.09	0.03	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_MW304_241128	MW304	28 Nov 2024	1166588	1.74	1.76	1.76	<0.01	<0.01	0.14	<0.01	1.6	<0.01	<0.01	<0.05	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_MW307_241128	MW307	28 Nov 2024	1166588	780	1,412.03	1,646.9	110	110	610	44	170	<0.125	<0.125	21	84	200	32	55	0.93	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_MW311_241128	MW311	28 Nov 2024	1166588	0.04	<0.05	<0.1	<0.01	<0.01	0.02	<0.01	0.02	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_MW312_241128	MW312	28 Nov 2024	1166588	0.11	0.14	0.16	0.01	0.02	0.10	<0.01	0.01	<0.01	<0.01	<0.05	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_MW313_241204	MW313	04 Dec 2024	1169993	<0.01	<0.05	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_MW315_241128	MW315	28 Nov 2024	1166588	<0.01	<0.05	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_MW317_241126	MW317	26 Nov 2024	1166588	0.05	0.05	<0.1	<0.01	<0.01	0.02	<0.01	0.03	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_MW319_241129	MW319	29 Nov 2024	1166588	0.17	0.17	0.17	<0.01	<0.01	0.03	<0.01	0.14	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_MW321_241128	MW321	28 Nov 2024	1166588	1,350	1,385.88	1,441.48	3.4	5.6	250	47	1,100	<0.625	<0.625	0.34	1.1	12	2.2	15	1.9	<0.625	<0.01	<0.01	<0.01	<0.01
0445S_MW323_241129	MW323	29 Nov 2024	1166588	<0.01	<0.05	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_MW329_241129	MW329	29 Nov 2024	1166588	0.35	0.45	0.57	0.10	0.08	0.31	<0.01	0.04	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445N_MW342_241129	MW342	29 Nov 2024	1166588	11.6	14.78	16.73	0.96	0.97	8.0	0.29	3.6	<0.01	<0.01	<0.05	0.32	1.5	0.10	0.3	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445N_MW345_241203	MW345	03 Dec 2024	1169993	0.24	0.27	0.32	0.03	0.04	0.21	<0.01	0.03	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445N_MW346_241203	MW346	03 Dec 2024	1169993	<0.01	<0.05	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW350D_241203	MW350	03 Dec 2024	1169993	0.84	1.12	1.21	0.05	0.05	0.32	0.02	0.52	<0.01	<0.01	<0.05	0.02	0.09	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW350S_241203	MW350	03 Dec 2024	1169993	73	98.9	105.75	2.5	3.7	45	2.0	28	<0.01	<0.01	1.3	2.7	11	1.3	4.5	0.04	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW351_241128	MW351	28 Nov 2024	1166588	0.047	0.077	0.082	0.007	0.005	0.027	<0.001	0.02	<0.001	<0.001	0.005	0.003	0.007	0.002	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
0445E_MW352_241128	MW352	28 Nov 2024	1166588	0.024	0.028	0.03	0.002	0.002	0.008	<0.001	0.016	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
0445E_MW353_241204	MW353	04 Dec 2024	1169993	43	58.3	68.4	5.5	6.0	31	1.1	12	<0.01	<0.01	1.1	1.1	5.1	1.1	1.4	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW354_241128	MW354	28 Nov 2024	1166588	0.26	0.3	0.31	0.02	0.01	0.09	<0.01	0.17	<0.01	<0.01	<0.05	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_MW356_241204	MW356	04 Dec 2024	1169993	<0.01	<0.05	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_MW357_241129	MW357	29 Nov 2024	1166588	0.06	0.06	<0.1	<0.01	<0.01	0.04	<0.01	0.02	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_MW360_241128	MW360	28 Nov 2024	1166588	0.31	0.31	0.33	<0.01	0.01	0.15	0.01	0.16	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_MW361_241128	MW361	28 Nov 2024	1166588	0.39	0.49	0.5	0.01	<0.01	0.13	0.01	0.26	<0.01	<0.01	<0.05	0.02	0.02	0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW403_241203	MW403	03 Dec 2024	1169993	73	94.64	102.99	4.5	4.7	31	1.5	42	<0.1	<0.01	1.4	2.2	9.5	1.1	2.3	0.05	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_MW404_241203	MW404	03 Dec 2024	1169993	164	209.3	226.84	9.7	10	73	3.9	91	<0.2	<0.01	2.1	3.7	18	3.5	8.2	0.04	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_MW416_241129	MW416	29 Nov 2024	1166588	1.18	1.62	1.65	<0.01	<0.01	0.18	0.03	1	<0.01	<0.01	<0.05	0.01	0.05	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_OTH019_241125	OTH019	25 Nov 2024	1166588	0.313	0.359	0.399	0.015	0.026	0.22	0.009	0.093	<0.001	<0.001	0.006	0.002	0.014	0.002	0.007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Environmental Standards

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

Table B1: Nov/Dec 2024 OMP Sampling Event: Groundwater Analytical Results

				PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides						
				4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				0.001	0.005	0.001	0.001	0.005	0.005	0.005	0.005	0.005	0.005	0.005
PFAS NEMP 2020 Drinking Water														
PFAS NEMP 2020 Freshwater 95%														
PFAS NEMP 2020 Freshwater 99%														
PFAS NEMP 2020 Recreational Water														
Field ID	**Location Code**	**Date**	**Lab Report Number**											
0445E_MW009_241203	MW009	03 Dec 2024	1169993	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW012_241203	MW012	03 Dec 2024	1169993	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW016_241203	MW016	03 Dec 2024	1169993	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW018_241128	MW018	28 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW020_241203	MW020	03 Dec 2024	1169993	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW029_241203	MW029	03 Dec 2024	1169993	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW034_241128	MW034	28 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW035_241203	MW035	03 Dec 2024	1169993	<0.01	**0.20**	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW042_241204	MW042	04 Dec 2024	1169993	<0.01	**0.17**	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW043_241203	MW043	03 Dec 2024	1169993	<0.01	**0.25**	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW046D_241128	MW046	28 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW046I_241128	MW046	28 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445S_MW051_241129	MW051	29 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW052_241203	MW052	03 Dec 2024	1169993	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445S_MW056_241204	MW056	04 Dec 2024	1169993	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445S_MW304_241128	MW304	28 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445S_MW307_241128	MW307	28 Nov 2024	1166588	**0.94**	**130**	**0.03**	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445S_MW311_241128	MW311	28 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445S_MW312_241128	MW312	28 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445_MW313_241204	MW313	04 Dec 2024	1169993	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445S_MW315_241128	MW315	28 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445S_MW317_241126	MW317	26 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445S_MW319_241129	MW319	29 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445S_MW321_241128	MW321	28 Nov 2024	1166588	<0.01	**1.2**	**0.64**	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445S_MW323_241129	MW323	29 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445S_MW329_241129	MW329	29 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445N_MW342_241129	MW342	29 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445N_MW345_241203	MW345	03 Dec 2024	1169993	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445N_MW346_241203	MW346	03 Dec 2024	1169993	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW350D_241203	MW350	03 Dec 2024	1169993	<0.01	**0.09**	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW350S_241203	MW350	03 Dec 2024	1169993	**0.01**	**2.6**	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW351_241128	MW351	28 Nov 2024	1166588	<0.001	<0.005	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0445E_MW352_241128	MW352	28 Nov 2024	1166588	<0.001	<0.005	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0445E_MW353_241204	MW353	04 Dec 2024	1169993	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW354_241128	MW354	28 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445_MW356_241204	MW356	04 Dec 2024	1169993	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445_MW357_241129	MW357	29 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445_MW360_241128	MW360	28 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445_MW361_241128	MW361	28 Nov 2024	1166588	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW403_241203	MW403	03 Dec 2024	1169993	<0.01	**0.58**	**0.06**	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445E_MW404_241203	MW404	03 Dec 2024	1169993	<0.01	**0.10**	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445S_MW416_241129	MW416	29 Nov 2024	1166588	<0.01	**0.37**	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
0445_OTH019_241125	OTH019	25 Nov 2024	1166588	<0.001	<0.005	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Environmental Standards

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

Table B2: Nov/Dec 2024 OMP Sampling Event: Surface Water Analytical Results

				PFAS			PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids									
				Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of PFAS	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				0.001	0.005	0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
PFAS NEMP 2020 Drinking Water				0.07														0.56						
PFAS NEMP 2020 Freshwater 95%											0.13							220						
PFAS NEMP 2020 Freshwater 99%											0.00023							19						
PFAS NEMP 2020 Recreational Water				2														10						
Field ID	**Location Code**	**Date**	**Lab Report Number**																					
0445S_SW302_241127	SW302	27 Nov 2024	1166588	3.42	4.88	5.74	0.53	0.10	0.42	0.03	3.0	<0.01	<0.01	0.35	0.30	0.24	0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW307_241127	SW307	27 Nov 2024	1166588	0.15	0.17	0.19	0.02	<0.01	0.04	<0.01	0.11	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW310_241127	SW310	27 Nov 2024	1166588	0.12	0.12	0.13	<0.01	<0.01	0.03	<0.01	0.09	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW311_241126	SW311	26 Nov 2024	1166588	0.33	0.37	0.39	0.01	<0.01	0.02	<0.01	0.31	<0.01	<0.01	<0.05	0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW313_241125	SW313	25 Nov 2024	1166588	31.3	38.18	40.12	0.33	0.45	6.3	0.52	25	0.20	0.06	0.67	1.5	2.6	0.58	1.2	0.53	0.04	<0.01	<0.01	<0.01	<0.01
0445S_SW316_241126	SW316	26 Nov 2024	1166588	0.3	0.33	0.35	0.02	<0.01	0.05	<0.01	0.25	<0.01	<0.01	<0.05	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW321_241126	SW321	26 Nov 2024	1166588	0.53	0.53	0.53	<0.01	<0.01	0.03	<0.01	0.5	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW322_241126	SW322	26 Nov 2024	1166588	1.2	1.37	1.41	0.02	0.02	0.20	0.01	1	<0.01	<0.01	<0.05	0.06	0.06	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW323_241126	SW323	26 Nov 2024	1166588	1.3	1.52	1.57	0.02	0.02	0.20	0.01	1.1	<0.01	<0.01	<0.05	0.11	0.06	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW324_241126	SW324	26 Nov 2024	1166588	1.19	1.58	1.68	0.05	0.03	0.28	0.01	0.91	<0.01	<0.01	0.06	0.13	0.10	0.02	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW326_241125	SW326	25 Nov 2024	1166588	3.14	3.57	3.72	0.05	0.06	0.64	0.04	2.5	0.01	<0.01	<0.05	0.11	0.14	0.05	0.08	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW332_241124	SW332	25 Nov 2024	1166588	22.6	29.02	31.95	1.4	1.5	9.6	0.89	13	0.02	<0.01	0.29	0.60	3.1	0.31	0.72	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW333_241126	SW333	26 Nov 2024	1166588	1.77	2.07	2.19	0.06	0.06	0.47	0.04	1.3	<0.01	<0.01	<0.05	0.05	0.14	0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW336_241127	SW336	27 Nov 2024	1166588	16.8	24.24	26.63	0.27	0.42	2.8	0.21	14	0.42	0.09	0.30	0.69	2.0	0.48	1.2	0.36	0.38	0.17	0.03	<0.01	<0.01
0445S_SW338_241125	SW338	25 Nov 2024	1166588	1.13	1.41	1.56	0.04	0.03	0.23	0.11	0.9	<0.01	<0.01	<0.05	0.04	0.14	0.02	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW340_241126	SW340	26 Nov 2024	1166588	4.47	5.84	6.77	0.07	0.08	0.77	0.50	3.7	0.02	<0.01	0.08	0.25	0.35	0.23	0.32	0.14	0.08	0.04	<0.01	<0.01	<0.01
0445S_SW346_241125	SW346	25 Nov 2024	1166588	1.31	1.59	1.67	0.04	0.03	0.21	0.01	1.1	<0.01	<0.01	<0.05	0.07	0.09	0.03	0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW349_241125	SW349	25 Nov 2024	1166588	1.56	1.88	2	0.05	0.04	0.26	0.02	1.3	<0.01	<0.01	<0.05	0.08	0.11	0.03	0.05	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW355_241125	SW355	25 Nov 2024	1166588	0.44	0.54	0.55	0.02	0.01	0.08	<0.01	0.36	<0.01	<0.01	<0.05	0.02	0.03	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445N_SW370_241127	SW370	27 Nov 2024	1166588	0.16	0.18	0.18	<0.01	<0.01	0.05	<0.01	0.11	<0.01	<0.01	<0.05	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445N_SW374_241127	SW374	27 Nov 2024	1166588	0.06	0.06	<0.1	<0.01	<0.01	0.01	<0.01	0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445N_SW375_241127	SW375	27 Nov 2024	1166588	0.08	0.08	<0.1	<0.01	<0.01	0.02	<0.01	0.06	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_SW379_241126	SW379	26 Nov 2024	1166588	0.92	1.32	1.52	0.14	0.05	0.18	<0.01	0.74	0.02	0.02	0.12	0.06	0.06	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_SW380_241127	SW380	27 Nov 2024	1166588	0.09	0.13	0.13	<0.01	<0.01	0.02	<0.01	0.07	<0.01	<0.01	<0.05	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_SW382_241127	SW382	27 Nov 2024	1166588	<0.01	<0.05	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_SW387_241127	SW387	27 Nov 2024	1166588	0.02	<0.05	<0.1	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445E_SW388_241127	SW388	27 Nov 2024	1166588	0.04	<0.05	<0.1	<0.01	<0.01	0.01	<0.01	0.03	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW390_241127	SW390	27 Nov 2024	1166588	<0.01	<0.05	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW393_241127	SW393	27 Nov 2024	1166588	<0.01	<0.05	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW395_241127	SW395	27 Nov 2024	1166588	0.07	0.16	0.16	<0.01	<0.01	0.03	<0.01	0.04	<0.01	<0.01	<0.05	0.09	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW396_241204	SW396	04 Dec 2024	1169993	2.95	3.86	4.3	0.27	0.28	2.0	0.06	0.95	<0.01	<0.01	0.05	0.09	0.36	0.05	0.09	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW397_241127	SW397	27 Nov 2024	1166588	6.8	9.05	10.25	0.54	0.76	3.5	0.22	3.3	<0.01	<0.01	0.13	0.20	0.92	0.14	0.32	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW398_241127	SW398	27 Nov 2024	1166588	<0.01	<0.05	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW400_241127	SW400	27 Nov 2024	1166588	0.27	0.32	0.34	0.02	0.02	0.12	<0.01	0.15	<0.01	<0.01	<0.05	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW401_241127	SW401	27 Nov 2024	1166588	0.36	0.41	0.43	0.02	0.02	0.16	<0.01	0.2	<0.01	<0.01	<0.05	<0.01	0.02	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW403_241126	SW403	26 Nov 2024	1166588	0.35	0.4	0.43	0.02	0.03	0.17	<0.01	0.18	<0.01	<0.01	<0.05	<0.01	0.02	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW404_241126	SW404	26 Nov 2024	1166588	<0.01	<0.05	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW405_241126	SW405	26 Nov 2024	1166588	0.2	0.2	0.21	<0.01	0.01	0.08	<0.01	0.12	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW409_241126	SW409	26 Nov 2024	1166588	0.02	<0.05	<0.1	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW412_241126	SW412	26 Nov 2024	1166588	0.04	0.05	<0.1	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	<0.01	<0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW416_241126	SW416	26 Nov 2024	1166588	<0.01	<0.05	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW424_241126	SW424	26 Nov 2024	1166588	1.93	2.14	2.18	0.01	0.02	0.23	0.01	1.7	0.01	<0.01	<0.05	0.09	0.07	0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW427_241125	SW427	25 Nov 2024	1166588	0.14	0.16	0.16	<0.01	<0.01	0.03	<0.01	0.11	<0.01	<0.01	<0.05	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW430_241125	SW430	25 Nov 2024	1166588	0.17	0.19	0.19	<0.01	<0.01	0.02	<0.01	0.15	<0.01	<0.01	<0.05	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW431_241125	SW431	25 Nov 2024	1166588	0.08	0.1	0.12	<0.01	<0.01	0.02	<0.01	0.06	<0.01	<0.01	<0.05	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW432_241125	SW432	25 Nov 2024	1166588	0.12	0.14	0.14	<0.01	<0.01	0.02	<0.01	0.1	<0.01	<0.01	<0.05	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW434_241125	SW434	25 Nov 2024	1166588	0.01	<0.05	<0.1	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445S_SW448_241126	SW448	26 Nov 2024	1166588	1.61	2.01	2.14	0.07	0.03	0.61	0.02	1	<0.01	<0.01	0.09	0.07	0.12	0.02	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW462_241126	SW462	26 Nov 2024	1166588	0.08	0.08	<0.1	<0.01	<0.01	0.02	<0.01	0.06	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW463_241126	SW463	26 Nov 2024	1166588	0.32	0.37	0.37	<0.01	<0.01	0.02	<0.01	0.3	<0.01	<0.01	<0.05	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW470_241127	SW470	27 Nov 2024	1166588	0.42	0.45	0.48	0.02	0.02	0.19	<0.01	0.23	<0.01	<0.01	<0.05	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW471_241127	SW471	27 Nov 2024	1166588	5.2	7.32	8.37	0.66	0.66	3.2	0.13	2	<0.01	<0.01	0.12	0.19	0.83	0.11	0.21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0445_SW487_241127	SW487	27 Nov 2024	1166588	12.2	14.81	16.17	0.60	0.76	4.5	0.34	7.7	<0.01	<0.01	0.15	0.22	1.1	0.17	0.37	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Environmental Standards

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

Table B2: Nov/Dec 2024 OMP Sampling Event: Surface Water Analytical Results

				PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides						
				4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				0.001	0.005	0.001	0.001	0.005	0.005	0.005	0.005	0.005	0.005	0.005
PFAS NEMP 2020 Drinking Water														
PFAS NEMP 2020 Freshwater 95%														
PFAS NEMP 2020 Freshwater 99%														
PFAS NEMP 2020 Recreational Water														
Field ID	**Location Code**	**Date**	**Lab Report Number**											
0445S_SW302_241127	**SW302**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW307_241127	**SW307**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW310_241127	**SW310**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW311_241126	**SW311**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW313_241125	**SW313**	**25 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW316_241126	**SW316**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW321_241126	**SW321**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW322_241126	**SW322**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW323_241126	**SW323**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW324_241126	**SW324**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW326_241125	**SW326**	**25 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW332_241124	**SW332**	**25 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW333_241126	**SW333**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW336_241127	**SW336**	**27 Nov 2024**	**1166588**	*<0.01*	**1.2**	**1.3**	**0.13**	**0.09**	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW338_241125	**SW338**	**25 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW340_241126	**SW340**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	**0.07**	**0.05**	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW346_241125	**SW346**	**25 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW349_241125	**SW349**	**25 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW355_241125	**SW355**	**25 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445N_SW370_241127	**SW370**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445N_SW374_241127	**SW374**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445N_SW375_241127	**SW375**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445E_SW379_241126	**SW379**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445E_SW380_241127	**SW380**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445E_SW382_241127	**SW382**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445E_SW387_241127	**SW387**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445E_SW388_241127	**SW388**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW390_241127	**SW390**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW393_241127	**SW393**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW395_241127	**SW395**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW396_241204	**SW396**	**04 Dec 2024**	**1169993**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW397_241127	**SW397**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW398_241127	**SW398**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW400_241127	**SW400**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW401_241127	**SW401**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW403_241126	**SW403**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW404_241126	**SW404**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW405_241126	**SW405**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW409_241126	**SW409**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW412_241126	**SW412**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW416_241126	**SW416**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW424_241126	**SW424**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW427_241125	**SW427**	**25 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW430_241125	**SW430**	**25 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW431_241125	**SW431**	**25 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW432_241125	**SW432**	**25 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW434_241125	**SW434**	**25 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445S_SW448_241126	**SW448**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW462_241126	**SW462**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW463_241126	**SW463**	**26 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW470_241127	**SW470**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW471_241127	**SW471**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*
0445_SW487_241127	**SW487**	**27 Nov 2024**	**1166588**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*

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

Appendix C Physical Parameter Results Tables

Tables provided are as follows:

- TC1 – Groundwater Gauging Data;
- TC2 – Groundwater Field Parameters; and
- TC3 – Surface Water Field Parameters.

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Table C1: Groundwater Gauging

Property ID	Well ID	Gauging Date	Aquifer	Screen depth (mbgl)	Well Depth (mbtoc)	Depth to Water (mbtoc)	Water Column Depth (m)	TOC Elevation (mAHD)	Ground- water Elevation (mAHD)	Condition of Well
0445	MW009	27/11/2024	Shepparton and Coonambidgal Fluvium - Intermediate Aquifer	8.6-11.6	12.316	7.480	4.836	166.280	158.800	Good
0445	MW012	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	7.2-10.2	10.500	8.375	2.125	167.360	158.985	Good
0445	MW016	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	6.8-9.8	9.970	7.560	2.410	166.160	158.600	Good
0445	MW018	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	6.27-9.27	10.507	6.960	3.547	165.430	158.470	Good
0445	MW020	03/12/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	5.5-8.5	7.080	6.920	0.160	165.410	158.490	Good
0445	MW029	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	7.0-10.0	11.155	8.470	2.685	168.110	159.640	Good
0445	MW034	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	7.0-10.0	11.244	8.136	3.108	166.630	158.494	Good
0445	MW035	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	7.2-10.2	11.437	7.664	3.773	166.220	158.556	Good
0445	MW042	27/11/2024	Shepparton and Coonambidgal Fluvium - Intermediate Aquifer	15.0-17.0	17.640	7.993	9.647	166.620	158.627	Good
0445	MW043	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	9.8-12.3	13.454	7.891	5.563	166.550	158.659	Good
0445	MW046_D	27/11/2024	Shepparton and Coonambidgal Fluvium - Deep Aquifer	18.0-21.0	22.370	8.614	13.756	166.490	157.876	Good
0445	MW046_I	27/11/2024	Shepparton and Coonambidgal Fluvium - Intermediate Aquifer	11.0-13.44	14.080	7.979	6.101	166.480	158.501	Good
0445	MW051	28/11/2024	Shepparton Colluvium - Shallow Aquifer	28.17-31.17	34.650	24.035	10.615	187.950	163.915	Good
0445	MW052	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	6.06-11.06	9.650	8.477	1.173	168.490	160.013	Good
0445	MW056	03/12/2024	Shepparton and Coonambidgal Fluvium - Perched Aquifer	*Unknown*	3.650	2.290	1.360	183.590	181.300	Good
0445	MW304	26/11/2024	Shepparton Colluvium - Shallow Aquifer	18.0-21.0	22.096	15.634	6.462	176.131	160.497	Good
0445	MW307	26/11/2024	Shepparton Colluvium - Shallow Aquifer	23.5-26.5	27.695	19.606	8.089	181.086	161.480	Good
0445	MW311	26/11/2024	Shepparton Colluvium - Shallow Aquifer	19.0-22.2	22.920	20.155	2.765	182.452	162.297	Good
0445	MW312	26/11/2024	Shepparton Colluvium - Shallow Aquifer	14.0-17.0	17.874	11.212	6.662	175.841	164.629	Good
0445	MW313	03/12/2024	Shepparton Colluvium - Shallow Aquifer	31.0-34.0	34.400	30.120	4.280	193.128	163.008	Good
0445	MW315	26/11/2024	Shepparton Colluvium - Shallow Aquifer	39.0-41.0	42.900	40.887	2.013	204.875	163.988	Good
0445	MW317	26/11/2024	Shepparton Colluvium - Shallow Aquifer	34.0-38.0	39.181	38.036	1.145	204.364	166.328	Good
0445	MW318	26/11/2024	Shepparton Colluvium - Shallow Aquifer	37.0-40.0	_	Dry	-	-	-	Good
0445	MW319	28/11/2024	Shepparton Colluvium - Shallow Aquifer	38.0-41.0	43.000	35.049	7.951	199.524	164.475	Good
0445	MW321	26/11/2024	Shepparton Colluvium - Shallow Aquifer	35.0-38.0	39.909	36.143	3.766	200.815	164.672	Good
0445	MW323	28/11/2024	Shepparton Colluvium - Shallow Aquifer	19.0-22.0	23.050	19.335	3.715	184.472	165.137	Good
0445	MW329	28/11/2024	Shepparton Colluvium - Shallow Aquifer	16.0-19.0	20.000	14.811	5.189	181.435	166.624	Good
0445	MW342	26/11/2024	Shepparton Colluvium - Shallow Aquifer	13.0-17.0	17.690	13.490	4.200	180.605	167.115	Good
0445	MW345	26/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	4.0-7.0	5.560	5.231	0.329	168.316	163.085	Good
0445	MW346	26/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	6.0-9.0	9.070	3.475	5.595	166.944	163.469	Good
0445	MW350_D	27/11/2024	Shepparton and Coonambidgal Fluvium - Deep Aquifer	17.5-19.5	20.633	8.485	12.148	168.229	159.744	Good
0445	MW350_S	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	6.5-9.5	10.140	8.548	1.592	168.233	159.685	Good
0445	MW351	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	5.0-8.0	8.938	6.011	2.927	164.790	158.779	Good
0445	MW352	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	6.0-9.0	9.859	5.798	4.061	164.493	158.695	Good
0445	MW353	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	6.0-9.0	7.989	7.678	0.311	166.625	158.947	Good
0445	MW354	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	7.0-10.0	10.964	7.482	3.482	166.625	159.143	Good
0445	MW356	28/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	1.0-3.0	3.740	1.740	2.000	156.882	155.142	Good
0445	MW357	28/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	2.5-5.5	6.310	2.537	3.773	156.247	153.710	Good
0445	MW360	25/11/2024	Shepparton Colluvium - Shallow Aquifer	10.7-12.7	12.890	8.230	4.660	164.890	156.660	Good
0445	MW361	25/11/2024	Shepparton Colluvium - Shallow Aquifer	3.5-6.5	6.275	2.290	3.985	153.716	151.426	Good
0445	MW403	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	6.98-9.98	9.977	7.288	2.689	166.926	159.638	Good
0445	MW404	27/11/2024	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	7.03-10.03	10.180	7.117	3.063	166.617	159.500	Good
0445	MW416	28/11/2024	Shepparton Colluvium - Shallow Aquifer	25.5-30.0	29.540	23.409	6.131	187.72	164.311	Good

Table C2: Groundwater Field Parameters

Property ID	Well ID	Hydrasleeve Deployment Date	Sample Collection Date	Aquifer	Sample Method / Comments	HydraSleeve Deployment Depth (mbtoc)	DO (mg/L)	EC (µS/cm)	pH	ORP (mV)	Temp (°C)	Turbidity	Water Colour	Odour	Sheen	Other Observations
0445	MW009	27/11/2024 15:36	3/12/2024 14:27	Shepparton and Coonambidgal Fluvium - Intermediate Aquifer	HydraSleeve™	12.18	6.72	317.4	6.49	-107.4	22.3	V Low	Light brown	No odour	No sheen	No foaming
0445	MW012	27/11/2024 16:07	3/12/2024 13:07	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	10.38	13.3^	264.9	6.12	-163.0	20.6	Low	Light brown	No odour	No sheen	No foaming
0445	MW016	27/11/2024 14:45	3/12/2024 13:54	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	9.87	8.04	313.10	6.13	-95.10	21.00	Clear	Clear	No odour	No sheen	No foaming
0445	MW018	27/11/2024 15:36	28/11/2024 14:45	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	10.40	1.89	599.00	6.50	21.60	21.40	Clear	Clear	No odour	No sheen	No foaming
0445	MW020	-	3/12/2024 12:45	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	Bailer	-	2.38	325.00	6.42	-155.00	17.90	Low	White	No odour	No sheen	No foaming
0445	MW029	27/11/2024 16:30	3/12/2024 13:20	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	11.00	4.01	96.00	6.22	-353.00	21.40	Low / Med	Light brown, minor sediment	No odour	No sheen	No foaming
0445	MW034	27/11/2024 13:01	28/11/2024 13:22	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	11.10	2.45	257.00	6.30	-130.10	19.50	Low / Med	Light brown/green, minor sediment	No odour	No sheen	No foaming
0445	MW035	27/11/2024 14:50	3/12/2024 15:40	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	11.28	1.14	282.00	6.14	-144.00	19.60	Clear	Clear	No odour	No sheen	No foaming
0445	MW042	27/11/2024 15:01	4/12/2024 15:10	Shepparton and Coonambidgal Fluvium - Intermediate Aquifer	HydraSleeve™	17.51	21.9^	375.60	6.46	57.80	21.50	Clear	Clear	No odour	No sheen	No foaming
0445	MW043	27/11/2024 15:03	3/12/2024 15:02	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	13.30	0.90	275.30	6.08	-196.40	20.70	Clear	Clear	No odour	No sheen	No foaming
0445	MW046_D	27/11/2024 13:21	28/11/2024 13:39	Shepparton and Coonambidgal Fluvium - Deep Aquifer	HydraSleeve™	22.05	1.13	259.40	6.11	56.00	21.20	Clear	Clear	No odour	No sheen	No foaming
0445	MW046_I	27/11/2024 13:18	28/11/2024 13:40	Shepparton and Coonambidgal Fluvium - Intermediate Aquifer	HydraSleeve™	13.90	0.88	255.50	6.05	50.20	20.70	Clear	Clear	No odour	No sheen	No foaming
0445	MW051	28/11/2024 11:05	29/11/2024 13:05	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	34.51	0.62	863.00	6.69	8.00	21.60	V Low	Brown	No odour	No sheen	No foaming
0445	MW052	27/11/2024 16:44	3/12/2024 14:45	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	9.52	0.92	129.30	5.78	-102.30	20.90	Clear	Clear	No odour	No sheen	No foaming
0445	MW056	3/12/2024 10:20	4/12/2024 10:10	Shepparton Colluvium - Perched Aquifer	HydraSleeve™	3.50	3.12	407.20	6.57	-150.10	23.00	Medium	Light brown	No odour	No sheen	No foaming
0445	MW304	26/11/2024 8:20	28/11/2024 11:55	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	21.95	1.71	6581.00	#	65.00	20.90	Medium	Light grey, minor sediment	No odour	No sheen	No foaming
0445	MW307	26/11/2024 8:10	28/11/2024 11:59	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	27.55	2.94	4563.00	6.55	-4907^	21.10	Clear	Clear	No odour	No sheen	No foaming
0445	MW311	26/11/2024 7:34	28/11/2024 11:39	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	22.80	5.30	5489.00	#	102.60	20.70	Medium	Light orange	No odour	No sheen	No foaming
0445	MW312	26/11/2024 7:42	28/11/2024 11:47	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	17.75	1.14	47.16	6.85	-40.30	20.60	V Low	Brown	No odour	No sheen	No foaming
0445	MW313	3/12/2024 11:33	4/12/2024 11:15	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	34.30	0.88	807.00	6.65	-154.20	20.90	Clear	Clear	No odour	No sheen	No foaming
0445	MW315	26/11/2024 8:34	28/11/2024 12:26	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	42.75	4.01	1093.00	6.86	-10.00	22.00	Medium	Brown	No odour	No sheen	No foaming
0445	MW317	-	26/11/2024 9:06	Shepparton Colluvium - Shallow Aquifer	Bailer	39.05	2.25	1125.00	#	75.00	21.80	V Low	Light brown	Organic	No sheen	No foaming
0445	MW319	28/11/2024 8:30	29/11/2024 12:44	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	42.88	1.23	826.00	6.07	31.70	20.20	Clear	Clear	No odour	No sheen	No foaming
0445	MW321	26/11/2024 9:20	28/11/2024 12:43	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	39.80	1.11	1308.00	6.50	19.00	20.60	Low / Med	Light orange	No odour	No sheen	Minor foaming
0445	MW323	28/11/2024 11:21	29/11/2024 13:30	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	22.95	1.47	5005.00	5.51	32.00	20.40	Low	Light brown	No odour	No sheen	No foaming
0445	MW329	28/11/2024 11:22	29/11/2024 13:38	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	19.85	0.78	5012.00	6.00	-17.60	20.60	Clear	Clear	No odour	No sheen	No foaming
0445	MW342	28/11/2024 9:56	29/11/2024 14:05	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	17.55	5.62	974.00	9.83^	-106.20	19.60	Low	Light brown	No odour	No sheen	No foaming
0445	MW345	-	3/12/2024 11:05	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	Bailer	-	0.98	5201.00	6.62	-42.10	20.90	Low	Grey	No odour	No sheen	No foaming
0445	MW346	28/11/2024 9:19	3/12/2024 10:52	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	8.95	0.79	1733.00	6.50	-66.40	20.30	Clear	Clear	No odour	No sheen	No foaming
0445	MW350_D	27/11/2024 16:59	3/12/2024 9:39	Shepparton and Coonambidgal Fluvium - Deep Aquifer	HydraSleeve™	20.50	8.46^	259.90	6.55	-120.00	23.30	Clear	Clear	No odour	No sheen	No foaming
0445	MW350_S	27/11/2024 16:54	3/12/2024 9:35	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	10.00	2.11	301.70	6.25	-138.55	20.70	Clear	Clear	No odour	No sheen	No foaming
0445	MW351	27/11/2024 14:19	28/11/2024 14:50	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	8.80	3.37	134.80	5.83	20.60	20.60	Low	Brown	No odour	No sheen	No foaming
0445	MW352	27/11/2024 14:10	28/11/2024 15:00	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	9.75	0.81	140.50	6.10	-3.40	21.10	Clear	Clear	No odour	No sheen	No foaming
0445	MW353	-	4/12/2024 12:33	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	Bailer	-	24.6^	898.00	6.54	43.90	20.90	Medium	Brown	No odour	No sheen	No foaming

Table C2: Groundwater Field Parameters

Property ID	Well ID	Hydrasleeve Deployment Date	Sample Collection Date	Aquifer	Sample Method / Comments	HydraSleeve Deployment Depth (mbtoc)	DO (mg/L)	EC (µS/cm)	pH	ORP (mV)	Temp (°C)	Turbidity	Water Colour	Odour	Sheen	Other Observations
0445	MW354	27/11/2024 15:57	28/11/2024 15:16	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	10.85	1.26	319.00	6.06	-113.80	21.10	V Low	Brown	No odour	No sheen	No foaming
0445	MW356	28/11/2024 9:09	4/12/2024 12:00	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	3.62	1.23	97.30	7.23	-133.70	18.50	Medium	Light brown, minor sediment	No odour	No sheen	No foaming
0445	MW357	28/11/2024 7:44	29/11/2024 16:55	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	6.20	#	154.10	6.15	-4.90	22.50	Medium	White/light brown	No odour	No sheen	No foaming
0446	MW360	25/11/2024 17:59	28/11/2024 10:23	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	12.75	3.22	775.00	7.68	42.20	20.60	Low	Light brown	No odour	No sheen	No foaming
0445	MW361	25/11/2024 15:01	28/11/2024 10:35	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	6.15	#	455.40	7.40	-92.40	19.20	Low	Orange/brown	No odour	No sheen	No foaming
0445	MW403	27/11/2024 17:13	3/12/2024 9:22	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	9.85	4.74	252.80	5.96	-135.90	22.10	Low	White	No odour	No sheen	No foaming
0445	MW404	27/11/2024 17:23	3/12/2024 9:28	Shepparton and Coonambidgal Fluvium - Shallow Aquifer	HydraSleeve™	10.05	0.88	368.10	5.87	-169.70	22.00	Low	White	No sheen	No sheen	Minor foaming
0445	MW416	28/11/2024 11:06	29/11/2024 13:10	Shepparton Colluvium - Shallow Aquifer	HydraSleeve™	29.40	0.80	4398.00	6.00	-177.20	22.20	V Low	Light brown	Slight musty odour	No sheen	No foaming
0445	OTH019	-	25/11/2024 13:35	Shepparton and Coonambidgal Fluvium	Point Source Tap	-	0.98	409.80	6.39	108.10	26.50	Clear	Clear	No odour	No sheen	No foaming

Notes
DO - Dissolved Oxygen
EC - Electrical Conductivity
ORP - Corrected Oxidation Reduction Potential
µS/cm - Microsiemens per centimetre mV - millivolts
°C - degrees Celsius
Measurement not collected owing to sensor fault
^ Value unrealistic/erroneous.

Table C3: Surface Water Field Parameters

Location ID	Sample Date	Water Body	Flow	Sample Depth (m)	DO (mg/L)	EC (µS/cm)	pH	ORP (mV)	Temp (°C)	Turbidity	Odour	Sheen	Other Observations
SW302	27/11/2024	Drain	Gentle flow	0.1	4.07	67.3	5.23	-33.6	21.3	Brown, low turbidity	No odour	No sheen	No foaming
SW307	27/11/2024	Drain	Gentle flow	0.1	4.50	51.2	6.19	-89.9	21.3	Brown, medium turbidity	No odour	No sheen	No foaming
SW310	27/11/2024	Drain	Gentle flow	0.1	4.03	31.7	5.54	-20.7	21.2	Clear, brown, low turbidity	Organic odour	No sheen	No foaming
SW311	26/11/2024	Drain	Stagnant	0.2	2.21	89.6	6.41	-70.2	#	Brown, low turbidity	No odour	No sheen	No foaming
SW313	25/11/2024	Dam	Stagnant	0.1	2.10	351.2	6.74	-26.7	29.7	Brown, low turbidity	No odour	No sheen	No foaming
SW316	26/11/2024	Drain	Gentle flow	0.2	3.36	58.1	6.19	-72.5	#	Brown, low turbidity	No odour	No sheen	No foaming
SW321	26/11/2024	Drain	Stagnant	0.1	2.34	44.1	5.95	-67.3	#	Brown, low turbidity	No odour	No sheen	No foaming
SW322	26/11/2024	Drain	Gentle flow	0.2	4.81	44.1	5.93	-55.4	#	Brown, low turbidity	No odour	No sheen	No foaming
SW323	26/11/2024	Dam	Stagnant	0.3	4.48	41.3	5.70	-40.7	#	Light orange, low turbidity	No odour	No sheen	No foaming
SW324	26/11/2024	Drain	Stagnant	0.3	3.60	46.5	5.51	-28.4	#	Brown, low turbidity	No odour	No sheen	No foaming
SW326	25/11/2024	Drain	Stagnant	0.1	1.91	155.3	6.85	-8.1	28.6	Brown, medium turbidity	No odour	No sheen	No foaming
SW332	25/11/2024	Drain	Stagnant	0.1	2.97	757.0	7.59	-16.5	32.6	Brown, medium turbidity	Minor musty odour	No sheen	No foaming
SW333	26/11/2024	Drain	Gentle flow	0.2	5.16	78.2	5.92	-21.9	#	Brown, medium turbidity	No odour	No sheen	No foaming
SW336	27/11/2024	Dam	Stagnant	0.3	3.40	64.1	6.07	-76.2	21.8	Light brown, low turbidity	No odour	No sheen	No foaming
SW338	25/11/2024	Dam	Stagnant	0.3	6.49	268.2	8.62	-8.6	28.5	Clear	No odour	No sheen	No foaming
SW340	26/11/2024	Drain	Gentle flow	0.2	4.04	162.8	6.33	-15.3	#	Brown, medium turbidity	Organic odour	No sheen	No foaming
SW346	25/11/2024	Ornamental Pond	Stagnant	0.3	5.21	50.9	7.40	390.9	31.0	Brown, medium turbidity	No odour	No sheen	No foaming
SW349	25/11/2024	Ornamental Pond	Stagnant	0.3	6.37	96.7	7.49	585.3	31.0	Brown, medium turbidity	No odour	No sheen	No foaming
SW355	25/11/2024	Ornamental Pond	Stagnant	0.3	4.94	70.5	7.80	415.3	31.0	Brown, medium turbidity	No odour	No sheen	No foaming
SW370	27/11/2024	Drain	Moderate flow	0.3	5.24	38.6	5.93	-63.1	21.3	Light brown, low turbidity	No odour	No sheen	No foaming
SW374	27/11/2024	Drain	Moderate flow	0.3	4.00	41.8	5.74	-48.8	21.0	Clear, low turbidity	No odour	No sheen	No foaming
SW375	27/11/2024	Drain	Moderate flow	0.3	4.02	43.0	5.75	-26.1	21.2	Light brown, low turbidity	No odour	No sheen	No foaming
SW379	26/11/2024	Drain	Stagnant	0.1	2.86	105.3	#	63.1	25.4	Light brown, low turbidity	No odour	No sheen	No foaming
SW380	27/11/2024	Drain	Stagnant	0.3	5.01	16.3	6.12	-10.3	22.8	Light brown, low turbidity	No odour	No sheen	No foaming
SW382	27/11/2024	Dam	Stagnant	0.3	4.40	96.7	6.40	-149.5	25.2	Light brown, low turbidity	No odour	No sheen	No foaming
SW387	27/11/2024	Drain	Moderate flow	0.1	6.89	24.0	#	3.5	21.2	Clear	No odour	No sheen	No foaming
SW388	27/11/2024	Drain	Gentle flow	0.3	8.16	50.0	#	44.8	21.5	Light brown, low turbidity	No odour	No sheen	No foaming, organics present
SW390	27/11/2024	Kiewa River	Moderate flow	0.3	5.23	34.9	7.35	40.2	21.5	Clear	No odour	No sheen	Minor foaming
SW393	27/11/2024	Middle Creek	Moderate flow	0.3	6.30	186.7	#	49.9	21.4	Milky brown, high turbidity	No odour	No sheen	Minor foaming
SW395	27/11/2024	Oxbow	Gentle flow	0.3	1.74	102.9	#	52.4	22.5	Light brown, low turbidity	No odour	No sheen	No foaming
SW396	4/12/2024	Oxbow	Stagnant	0.1	3.08	451.8	7.19	-147.2	22.9	Brown, medium turbidity	No odour	No sheen	No foaming
SW397	27/11/2024	Oxbow	Stagnant	0.3	9.70	397.9	6.90	24.7	27.1	Brown, high turbidity	No odour	No sheen	No foaming
SW398	27/11/2024	Kiewa River	Moderate flow	0.3	5.65	34.1	#	18.0	21.1	Light brown, low turbid	No odour	No sheen	No foaming
SW400	27/11/2024	Oxbow	Gentle flow	0.1	2.76	150.3	#	37.7	21.5	Milky brown, high turbidity	No odour	No sheen	No foaming
SW401	27/11/2024	Oxbow	Stagnant	0.2	0.43	188.1	#	31.4	22.1	Light brown, high turbidity	No odour	No sheen	No foaming
SW403	26/11/2024	Oxbow	Gentle flow	0.2	8.87	214.9	#	50.2	26.9	Dark brown, medium turbidity	No odour	No sheen	No foaming
SW404	26/11/2024	Kiewa River	Moderate flow	0.3	5.66	29.9	#	10.3	24.0	Light brown, low turbidity	No odour	No sheen	No foaming
SW405	26/11/2024	Oxbow	Stagnant	0.3	2.66	412.4	#	6.8	22.3	Light yellow, medium turbidity	No odour	No sheen	No foaming
SW409	26/11/2024	Unnamed Creek	Gentle flow	0.3	4.00	51.7	#	24.1	23.1	Slight yellow, low turbidity	No odour	No sheen	No foaming
SW412	26/11/2024	Oxbow	Gentle flow	0.1	3.41	71.4	#	42.6	23.5	Brown, low/medium turbidity	No odour	No sheen	No foaming
SW416	26/11/2024	Kiewa River	Moderate flow	0.3	6.82	30.8	#	7.4	23.5	Brown, low turbidity	No odour	No sheen	Minor foaming
SW424	26/11/2024	Jack in the Box Creek	Gentle flow	0.2	4.91	59.4	#	32.6	22.4	Light brown, high turbidity	No odour	No sheen	No foaming, organics present
SW427	25/11/2024	Jack in the Box Creek	Gentle flow	0.1	3.15	111.3	#	5.0	24.2	Light brown, low turbidity	No odour	Slight sheen	Minor foaming
SW430	25/11/2024	Jack in the Box Creek	Gentle flow	0.1	8.66	144.2	#	21.7	26.3	Light brown, low turbidity	No odour	No sheen	No foaming
SW431	25/11/2024	Jack in the Box Creek	Stagnant	0.2	0.60	126.9	#	-59.6	22.8	Yellow, low turbidity	No odour	Slight sheen	No foaming, organics present
SW432	25/11/2024	Jack in the Box Creek	Gentle flow	0.1	5.82	125.9	#	22.2	24.3	Green/yellow, low turbidity	No odour	No sheen	No foaming
SW434	25/11/2024	Jack in the Box Creek	Stagnant	0.3	3.19	80.0	#	-0.8	23.4	Light brown, low turbidity	Organic odour	Slight sheen	No foaming
SW448	26/11/2024	Drain	Gentle flow	0.1	5.90	63.2	7.19	-111.0	#	Brown, low turbidity	No odour	No sheen	No foaming
SW462	26/11/2024	Unnamed Creek	Gentle flow	0.2	2.02	200.7	#	36.4	24.0	Brown, low turbidity	No odour	No sheen	No foaming
SW463	26/11/2024	Jack in the Box Creek	Stagnant	0.1	4.22	73.8	#	51.9	24.9	Light brown, high turbidity	No odour	No sheen	No foaming, organics present
SW470	27/11/2024	Oxbow	Gentle flow	0.3	1.33	150.6	#	42.2	21.7	Light brown, low turbidity	No odour	No sheen	No foaming
SW471	28/11/2024	Oxbow	Stagnant	0.3	2.54	351.0	#	63.1	21.4	Light brown, low turbidity	No odour	No sheen	No foaming
SW487	27/11/2024	Oxbow	Stagnant	0.3	5.71	413.0	8.00	90.9	25.1	Brown, high turbidity	No odour	No sheen	No foaming

Notes
DO - Dissolved Oxygen
EC - Electrical Conductivity
ORP - Corrected Oxidation Reduction Potential
µS/cm - microsiemens per centimetre mV - millivolts
°C - degrees Celsius
Measurement not collected owing to sensor fault

Appendix D Data Quality Assessment

Data Validation	
Project Number:	61395
Client:	Department of Defence
Site:	Bandiana Military Area
Matrix Type:	Groundwater and surface water
Laboratory:	Eurofins, Envirolab Services

Table D.1: Data Quality Assessment Summary

Precision		
Intra laboratory Duplicates (blind)	Relative Percent Differences (RPDs) less than 30.	***Groundwater*** A total of 5 groundwater blind duplicates were collected and analysed. Blind duplicates were collected and analysed at a rate greater than 1/10 primary samples. A total of 8 out of 145 replicate analytes (excluded 'analytes' which are a summation of other analytes) exceeded the data quality indicator. Analyte concentrations between the primary and corresponding blind duplicate samples were within an order of magnitude. The RPD exceedances are associated with the low concentrations reported. As such, the exceedances are not considered to impact the validity of the data. ***Surface water*** A total of 5 surface water blind duplicates were collected and analysed. Blind duplicates were collected and analysed at a rate of 1/10 primary samples. A total of 7 out of 145 replicate analytes (excluded 'analytes' which are a summation of other analytes) exceeded the data quality indicator. Analyte concentrations between the primary and corresponding blind duplicate samples were within an order of magnitude. The RPD exceedances are associated with the low concentrations reported. As such, the exceedances are not considered to impact the validity of the data.
Inter laboratory duplicates (split)	RPDs less than 30.	***Groundwater*** A total of 5 groundwater split duplicates were collected and analysed. Split duplicates were collected and analysed at a rate greater than 1/10 primary samples. A total of 9 out of 140 replicate analytes (excluded 'analytes' which are a summation of other analytes) exceeded the data quality indicator. Analyte concentrations between the primary and corresponding blind duplicate samples were within an order of magnitude. The RPD exceedances are generally associated with the low concentrations reported. As such, the exceedances are not considered to impact the validity of the data. ***Surface water*** A total of 5 surface water split duplicates were collected and analysed. Split duplicates were collected and analysed at a rate of 1/10 primary samples. A total of 2 out of 140 replicate

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		analytes (excluded 'analytes' which are a summation of other analytes) exceeded the data quality indicator. Analyte concentrations between the primary and corresponding blind duplicate samples were within an order of magnitude. The RPD exceedances are generally associated with the low concentrations reported. As such, the exceedances are not considered to impact the validity of the data.
Laboratory duplicates	RPDs less than 30.	A total of 3 laboratory duplicate RPD exceedances were reported out of 429 results (excluded 'analytes' which are a summation of other analytes and surrogate data from the secondary lab). Two of the exceedances were marginal with RPDs of 30 and 33, respectively. The third elevated RPD (lab duplicate 1166588 for sample SW424, with an RPD of 67%) was associated with low reported concentrations just above LOR. Overall, the RPD exceedances are not considered to impact the validity of the data.
Accuracy		
Laboratory control samples	Recoveries between 70-130%.	18 out of 637 lab control samples were outside of the target recovery range with the majority of those below 70%. All recovery ranges outside of the target range were related to PFAS which do not have assessment criteria as part of this assessment. Overall, lab control samples outside of the target range do not impact the validity of the data.
Laboratory matrix spikes	Recoveries between 70-130%.	16 out of 215 matrix spike results were outside of the target recovery range with the majority of those below 70%. Except for two instances, high and low recovery ranges were related to PFAS which do not have assessment criteria as part of this assessment. Overall, matrix spike recoveries outside of the target range do not impact the validity of the data.
Equipment calibration	-	All field equipment was calibrated by the equipment supplier. Calibration certificates have been provided as **Appendix E.**
Representativeness		
Sampling appropriate for media and analytes	-	Samples were collected using appropriate methods, in accordance with the methodology detailed within the SAQP (JBS&G 2024) and as detailed in this SER, with the exception of MW317, which was sampled with a bailer instead of HydraSleeve. The PFAS results were within historic ranges and as such is not considered a material divergence from the SAQP.
Samples extracted and analysed within holding times.	All samples within holding time	The review of holding times from the relevant laboratory reports showed that all samples were extracted and analysed within recommended holding times (28 days for PFAS in water samples when refrigerated).
Field trip blanks	Less than lab LOR.	A total of 2 trip blanks were submitted and analysed for PFAS. Results are presented in **Table D2** in this appendix. All analytes reported concentrations below the LOR.
Field rinsate blanks	Less than lab LOR.	Rinsate blank samples were collected at a frequency of one per day of sampling where appropriate (12 in total). Rinsate blank samples were collected from the decontaminated interface probe.

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		Results are presented in **Table D2** in this appendix. PFAS concentrations were reported below the LOR in all samples tested.
Field blanks	Less than lab LOR.	A total of 7 field blank samples were collected (one per day of sampling) and submitted for analysis for PFAS. Results are presented in **Table D2** in this appendix. All analytes reported concentrations below the LOR.
Laboratory blanks	Less than the lab LOR.	All 568 lab blanks (excluded 'analytes' which are a summation of other analytes) reported concentrations below the LOR.
Equipment decontamination	-	Non-dedicated sampling equipment was decontaminated between sample locations, in accordance with the SAQP (JBS&G 2024) and as detailed in this SER.
Comparability		
Standard operating procedures for samples collection and handling		Sampling was completed in accordance with methodologies outlined in the SAQP (JBS&G 2024).
Standard analytical methods used for all analysis.		Samples were analysed using NATA accredited methods.
Consistent field conditions, sampling staff and laboratory analysis		Sampling was completed by appropriately trained and qualified personnel.
Limit of reporting appropriate and consistent		The LOR was generally sufficiently low to enable assessment against adopted screening criteria. LORs were higher than the screening criteria for PFOS (0.00023 µg/L) for 99% species protection adopted for on and off-base water bodies (i.e. rivers, creeks, lakes and wetlands), however this is consistent with previous investigations and in accordance with the SAQP (JBS&G 2024). Furthermore, given that PFOS results were higher than the LOR of 0.01 µg/L for 86% of collected samples, the LOR did not significantly impact the program objectives and findings.
Completeness		
Program	All critical locations sampled	The scope of works was undertaken in general accordance with the SAQP (JBS&G 2024) and as prescribed by the OMP with the exception of MW318 which was found dry at the time of sampling. The deviation is not considered to have a material impact on the program objectives and findings (see **Section 3** for further context).

Table D.2: Summary of field and laboratory QA/QC samples (GW+SW) compared to DQI

QA/QC sample type	Total no. of results	No. of results meeting data quality indicator	Percentage meeting data quality indicator
Field blinds (intra-lab)	290	275	95%
Field splits (inter-lab)	280	269	96%
Field rinsates	348	348	100%
Field trip blanks	58	58	100%
Field blanks	203	203	100%
Lab duplicates	429	426	98%
Lab blanks	568	568	100%

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Lab matrix spikes	215	199	93%
Lab control samples	637	619	97%
Overall	**3028**	**2965**	**98%**

Note to Table: Lab information obtained from ESDAT Online which provides QAQC data for the primary lab only.

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Table D1 - Nov/Dec 2024 OMP Sampling Event: QA/QC Results

			Lab Report Number	1166588	1166588		1166588	MFL0040		1166588	1166588		1166588	MFL0040	
			Field ID	0445_SW404_241126	0445_QC103_241126		0445_SW404_241126	0445_QC203_241126		0445_SW409_241126	0445_QC102_241126		0445_SW409_241126	0445_QC202_241126	
			Date	26 Nov 2024	26 Nov 2024		26 Nov 2024	26 Nov 2024		26 Nov 2024	26 Nov 2024		26 Nov 2024	26 Nov 2024	
			Matrix Type	Water	Water	RPD	Water	Water	RPD	Water	Water	RPD	Water	Water	RPD
	Unit	EQL													
PFAS - Perfluoroalkyl Sulfonic Acids															
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	0.02	0.03	40	0.02	0.018	11
Perfluorononanesulfonic acid (PFNS)	µg/L	0.001		<0.01	<0.01	0	<0.01	-	-	<0.01	<0.01	0	<0.01	-	-
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
PFAS - Perfluoroalkyl Carboxylic Acids															
Perfluorobutanoic acid (PFBA)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	0.09	160	<0.01	<0.010	0
Perfluorohexanoic acid (PFHxA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorooctanoic acid (PFOA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorononanoic acid (PFNA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorodecanoic acid (PFDA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.050	0	<0.01	<0.01	0	<0.01	<0.050	0
PFAS - (n:2) Fluorotelomer Sulfonic Acids															
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
PFAS - Perfluoroalkyl Sulfonamides															
Perfluorooctane sulfonamide (FOSA)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.10	0	<0.05	<0.05	0	<0.05	<0.10	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.50	0	<0.05	<0.05	0	<0.05	<0.50	0
PFAS															
Sum of PFHxS and PFOS	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	0.02	0.03	40	0.02	0.018	11
Sum of PFAS (WA DER List)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.050	0	<0.05	0.12	82	<0.05	<0.050	0
Sum of PFAS	µg/L	0.005		<0.1	<0.1	0	<0.1	<0.10	0	<0.1	0.12	18	<0.1	<0.10	0

**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

Table B2 - Nov/Dec 2024 OMP Sampling Event: QA/QC Results

		Lab Report Number	1166588	1166588		1166588	MFL0040		1166588	1166588		1166588	MFL0040	
		Field ID	0445S_SW448_241126	0445_QC101_241126		0445S_SW448_241126	0445_QC201_241126		0445_SW395_241127	0445_QC102_241127		0445_SW395_241127	0445_QC202_241127	
		Date	26 Nov 2024	26 Nov 2024		26 Nov 2024	26 Nov 2024		27 Nov 2024	27 Nov 2024		27 Nov 2024	27 Nov 2024	
		Matrix Type	Water	Water	RPD	Water	Water	RPD	Water	Water	RPD	Water	Water	RPD
	Unit	EQL												
PFAS - Perfluoroalkyl Sulfonic Acids														
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001	**0.07**	**0.06**	15	**0.07**	**0.065**	7	<0.01	<0.01	0	<0.01	<0.010	0
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001	**0.03**	**0.04**	29	**0.03**	**0.026**	14	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001	**0.61**	**0.67**	9	**0.61**	**0.66**	8	**0.03**	**0.04**	29	**0.03**	**0.028**	7
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001	**0.02**	**0.03**	40	**0.02**	**0.025**	22	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001	**1.0**	**1.3**	26	**1.0**	**1.1**	10	**0.04**	**0.06**	40	**0.04**	**0.045**	12
Perfluorononanesulfonic acid (PFNS)	µg/L	0.001	<0.01	<0.01	0	<0.01	-	-	<0.01	<0.01	0	<0.01	-	-
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.001	<0.01	<0.01	0	<0.01	**0.019**	62	<0.01	<0.01	0	<0.01	<0.010	0
PFAS - Perfluoroalkyl Carboxylic Acids														
Perfluorobutanoic acid (PFBA)	µg/L	0.005	**0.09**	**0.11**	20	**0.09**	**0.082**	9	<0.05	<0.05	0	<0.05	<0.050	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.001	**0.07**	**0.18**	88	**0.07**	**0.075**	7	**0.09**	<0.01	160	**0.09**	<0.010	160
Perfluorohexanoic acid (PFHxA)	µg/L	0.001	**0.12**	**0.11**	9	**0.12**	**0.092**	26	<0.01	<0.01	0	<0.01	<0.010	0
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001	**0.02**	**0.02**	0	**0.02**	**0.015**	29	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorooctanoic acid (PFOA)	µg/L	0.001	**0.03**	**0.03**	0	**0.03**	**0.031**	3	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorononanoic acid (PFNA)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorodecanoic acid (PFDA)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.001	<0.01	**0.02**	67	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.001	<0.01	<0.01	0	<0.01	**0.011**	10	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.050	0	<0.01	<0.01	0	<0.01	<0.050	0
PFAS - (n:2) Fluorotelomer Sulfonic Acids														
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
PFAS - Perfluoroalkyl Sulfonamides														
Perfluorooctane sulfonamide (FOSA)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.10	0	<0.05	<0.05	0	<0.05	<0.10	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.50	0	<0.05	<0.05	0	<0.05	<0.50	0
PFAS														
Sum of PFHxS and PFOS	µg/L	0.001	**1.61**	**1.97**	20	**1.61**	**1.8**	11	**0.07**	**0.1**	35	**0.07**	**0.073**	4
Sum of PFAS (WA DER List)	µg/L	0.005	**2.01**	**2.48**	21	**2.01**	**2.1**	4	**0.16**	**0.1**	46	**0.16**	**0.073**	75
Sum of PFAS	µg/L	0.005	**2.14**	**2.65**	21	**2.14**	**2.2**	3	**0.16**	**0.1**	46	**0.16**	<0.10	46

***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);**

*****Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row hea**

Table B2 - Nov/Dec 2024 OMP Sampling Event: QA/QC Results

			Lab Report Number	1169993	1169993		1169993	MFL0268		1166588	1166588		1166588	MFL0040	
			Field ID	0445_SW396_241204	0445_QC101_241204		0445_SW396_241204	0445_QC201_241204		0445E_MW046D_241128	0445_QC101_241128		0445E_MW046D_241128	0445_QC201_241128	
			Date	04 Dec 2024	04 Dec 2024		04 Dec 2024	04 Dec 2024		28 Nov 2024	28 Nov 2024		28 Nov 2024	28 Nov 2024	
			Matrix Type	Water	Water	RPD	Water	Water	RPD	Water	Water	RPD	Water	Water	RPD
	Unit	EQL													
PFAS - Perfluoroalkyl Sulfonic Acids															
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001	0.27	0.28	4	0.27	0.30	11	0.12	0.13	8	0.12	0.14	15
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001	0.28	0.30	7	0.28	0.27	4	0.18	0.18	0	0.18	0.17	6
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001	2.0	2.0	0	2.0	1.9	5	1.6	2.0	22	1.6	1.8	12
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001	0.06	0.06	0	0.06	0.069	14	0.09	0.09	0	0.09	0.096	6
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001	0.95	0.92	3	0.95	0.71	29	2.6	2.8	7	2.6	2.3	12
Perfluorononanesulfonic acid (PFNS)	µg/L	0.001	<0.01	<0.01	0	<0.01	-	-	<0.01	<0.01	0	<0.01	-	-
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
PFAS - Perfluoroalkyl Carboxylic Acids															
Perfluorobutanoic acid (PFBA)	µg/L	0.005	0.05	0.05	0	0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.001	0.09	0.10	11	0.09	0.090	0	0.06	0.06	0	0.06	0.045	29
Perfluorohexanoic acid (PFHxA)	µg/L	0.001	0.36	0.37	3	0.36	0.31	15	0.29	0.31	7	0.29	0.26	11
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001	0.05	0.05	0	0.05	0.046	8	0.02	0.03	40	0.02	0.025	22
Perfluorooctanoic acid (PFOA)	µg/L	0.001	0.09	0.09	0	0.09	0.093	3	0.08	0.09	12	0.08	0.078	3
Perfluorononanoic acid (PFNA)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorodecanoic acid (PFDA)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.050	0	<0.01	<0.01	0	<0.01	<0.050	0
PFAS - (n:2) Fluorotelomer Sulfonic Acids															
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.01	0	<0.01	<0.010	0
PFAS - Perfluoroalkyl Sulfonamides															
Perfluorooctane sulfonamide (FOSA)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.10	0	<0.05	<0.05	0	<0.05	<0.10	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.05	0	<0.05	<0.050	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.50	0	<0.05	<0.05	0	<0.05	<0.50	0
PFAS															
Sum of PFHxS and PFOS	µg/L	0.001	2.95	2.92	1	2.95	2.6	13	4.2	4.8	13	4.2	4.1	2
Sum of PFAS (WA DER List)	µg/L	0.005	3.86	3.86	0	3.86	3.4	13	4.77	5.42	13	4.77	4.6	4
Sum of PFAS	µg/L	0.005	4.3	4.32	0	4.3	3.8	12	5.09	5.75	12	5.09	4.9	4

***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);**

*****Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row hea**

Table B2 - Nov/Dec 2024 OMP Sampling Event: QA/QC Results

		Lab Report Number	1166588	1166588		1166588	MFL0040		1166588	1166588		1166588	MFL0040	
		Field ID	0445E_MW351_241128	0445_QC102_241128		0445E_MW351_241128	0445_QC202_241128		0445S_MW319_241129	0445_QC101_241129		0445S_MW319_241129	0445_QC201_241129	
		Date	28 Nov 2024	28 Nov 2024		28 Nov 2024	28 Nov 2024		29 Nov 2024	29 Nov 2024		29 Nov 2024	29 Nov 2024	
		Matrix Type	Water	Water	RPD	Water	Water	RPD	Water	Water	RPD	Water	Water	RPD
	Unit	EQL												
PFAS - Perfluoroalkyl Sulfonic Acids														
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001	**0.007**	*<0.01*	0	**0.007**	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001	**0.005**	*<0.01*	0	**0.005**	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001	**0.027**	**0.03**	11	**0.027**	**0.026**	4	**0.03**	*<0.01*	100	**0.03**	**0.026**	14
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001	*<0.001*	*<0.01*	0	*<0.001*	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001	**0.020**	**0.02**	0	**0.020**	**0.017**	16	**0.14**	**0.07**	67	**0.14**	**0.13**	7
Perfluorononanesulfonic acid (PFNS)	µg/L	0.001	*<0.001*	*<0.01*	0	*<0.001*	-	-	*<0.01*	*<0.01*	0	*<0.01*	-	-
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.001	*<0.001*	*<0.01*	0	*<0.001*	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
PFAS - Perfluoroalkyl Carboxylic Acids														
Perfluorobutanoic acid (PFBA)	µg/L	0.005	**0.005**	*<0.05*	0	**0.005**	*<0.050*	0	*<0.05*	*<0.05*	0	*<0.05*	*<0.050*	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.001	**0.003**	*<0.01*	0	**0.003**	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
Perfluorohexanoic acid (PFHxA)	µg/L	0.001	**0.007**	*<0.01*	0	**0.007**	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001	**0.002**	*<0.01*	0	**0.002**	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
Perfluorooctanoic acid (PFOA)	µg/L	0.001	**0.006**	*<0.01*	0	**0.006**	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
Perfluorononanoic acid (PFNA)	µg/L	0.001	*<0.001*	*<0.01*	0	*<0.001*	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
Perfluorodecanoic acid (PFDA)	µg/L	0.001	*<0.001*	*<0.01*	0	*<0.001*	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.001	*<0.001*	*<0.01*	0	*<0.001*	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.001	*<0.001*	*<0.01*	0	*<0.001*	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.001	*<0.001*	*<0.01*	0	*<0.001*	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.001	*<0.001*	*<0.01*	0	*<0.001*	*<0.050*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.050*	0
PFAS - (n:2) Fluorotelomer Sulfonic Acids														
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	*<0.001*	*<0.01*	0	*<0.001*	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.005	*<0.005*	*<0.05*	0	*<0.005*	*<0.050*	0	*<0.05*	*<0.05*	0	*<0.05*	*<0.050*	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.001	*<0.001*	*<0.01*	0	*<0.001*	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001	*<0.001*	*<0.01*	0	*<0.001*	*<0.010*	0	*<0.01*	*<0.01*	0	*<0.01*	*<0.010*	0
PFAS - Perfluoroalkyl Sulfonamides														
Perfluorooctane sulfonamide (FOSA)	µg/L	0.005	*<0.005*	*<0.05*	0	*<0.005*	*<0.050*	0	*<0.05*	*<0.05*	0	*<0.05*	*<0.050*	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	*<0.005*	*<0.05*	0	*<0.005*	*<0.050*	0	*<0.05*	*<0.05*	0	*<0.05*	*<0.050*	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.005	*<0.005*	*<0.05*	0	*<0.005*	*<0.050*	0	*<0.05*	*<0.05*	0	*<0.05*	*<0.050*	0
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005	*<0.005*	*<0.05*	0	*<0.005*	*<0.050*	0	*<0.05*	*<0.05*	0	*<0.05*	*<0.050*	0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	*<0.005*	*<0.05*	0	*<0.005*	*<0.10*	0	*<0.05*	*<0.05*	0	*<0.05*	*<0.10*	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.005	*<0.005*	*<0.05*	0	*<0.005*	*<0.050*	0	*<0.05*	*<0.05*	0	*<0.05*	*<0.050*	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	*<0.005*	*<0.05*	0	*<0.005*	*<0.50*	0	*<0.05*	*<0.05*	0	*<0.05*	*<0.50*	0
PFAS														
Sum of PFHxS and PFOS	µg/L	0.001	**0.047**	**0.05**	6	**0.047**	**0.043**	9	**0.17**	**0.07**	83	**0.17**	**0.16**	6
Sum of PFAS (WA DER List)	µg/L	0.005	**0.077**	**0.05**	43	**0.077**	*<0.050*	43	**0.17**	**0.07**	83	**0.17**	**0.16**	6
Sum of PFAS	µg/L	0.005	**0.082**	*<0.1*	0	**0.082**	*<0.10*	0	**0.17**	*<0.1*	52	**0.17**	**0.16**	6

***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);**

*****Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row hea**

Table B2 - Nov/Dec 2024 OMP Sampling Event: QA/QC Results

			Lab Report Number	1166588	1166588		1166588	MFL0040		1169993	MFL0268		1169993	1169993	
			Field ID	0445S_MW416_241129	0445_QC102_241129		0445S_MW416_241129	0445_QC202_241129		0445E_MW009_241203	0445_QC201_241203		0445E_MW016_241203	0445_QC101_241203	
			Date	29 Nov 2024	29 Nov 2024		29 Nov 2024	29 Nov 2024		03 Dec 2024	03 Dec 2024		03 Dec 2024	03 Dec 2024	
			Matrix Type	Water	Water	RPD	Water	Water	RPD	Water	Water	RPD	Water	Water	RPD
	Unit	EQL													
PFAS - Perfluoroalkyl Sulfonic Acids															
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	0.27	0.37	31	0.51	0.48	6
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	0.44	0.30	38	0.67	0.60	11
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001		0.18	<0.01	179	0.18	0.081	76	2.0	2.2	10	3.9	3.3	17
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001		0.03	<0.01	100	0.03	0.015	67	0.18	0.18	0	0.29	0.23	23
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001		1.0	0.05	181	1.0	0.40	86	3.2	2.5	25	6.5	5.0	26
Perfluorononanesulfonic acid (PFNS)	µg/L	0.001		<0.01	<0.01	0	<0.01	-	-	<0.01	-	-	<0.01	<0.01	0
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.010	0	<0.01	<0.01	0
PFAS - Perfluoroalkyl Carboxylic Acids															
Perfluorobutanoic acid (PFBA)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.050	0	0.08	<0.050	46	0.11	0.10	10
Perfluoropentanoic acid (PFPeA)	µg/L	0.001		0.01	0.04	120	0.01	<0.010	0	0.12	0.11	9	0.20	0.18	11
Perfluorohexanoic acid (PFHxA)	µg/L	0.001		0.05	<0.01	133	0.05	0.023	74	0.53	0.56	6	1.1	0.97	13
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	0.07	0.10	35	0.17	0.16	6
Perfluorooctanoic acid (PFOA)	µg/L	0.001		0.01	<0.01	0	0.01	<0.010	0	0.13	0.16	21	0.39	0.34	14
Perfluorononanoic acid (PFNA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.010	0	<0.01	<0.01	0
Perfluorodecanoic acid (PFDA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.010	0	<0.01	<0.01	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.010	0	<0.01	<0.01	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.010	0	<0.01	<0.01	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.010	0	<0.01	<0.01	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.050	0	<0.01	<0.050	0	<0.01	<0.01	0
PFAS - (n:2) Fluorotelomer Sulfonic Acids															
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.010	0	<0.01	<0.01	0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.005		0.37	<0.05	152	0.37	0.20	60	<0.05	<0.050	0	<0.05	<0.05	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.010	0	<0.01	<0.01	0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001		<0.01	<0.01	0	<0.01	<0.010	0	<0.01	<0.010	0	<0.01	<0.01	0
PFAS - Perfluoroalkyl Sulfonamides															
Perfluorooctane sulfonamide (FOSA)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.050	0	<0.05	<0.05	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.050	0	<0.05	<0.05	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.050	0	<0.05	<0.05	0
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.050	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.10	0	<0.05	<0.10	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.050	0	<0.05	<0.050	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005		<0.05	<0.05	0	<0.05	<0.50	0	<0.05	<0.50	0	<0.05	<0.05	0
PFAS															
Sum of PFHxS and PFOS	µg/L	0.001		1.18	0.05	184	1.18	0.48	84	5.2	4.7	10	10.4	8.3	22
Sum of PFAS (WA DER List)	µg/L	0.005		1.62	0.09	179	1.62	0.70	79	6.4	6.0	6	12.88	10.53	20
Sum of PFAS	µg/L	0.005		1.65	<0.1	177	1.65	0.72	78	7.16	6.5	10	14.05	11.55	20

**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);

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row hea

Table D2 - Nov/Dec 2024 OMP Sampling Event: Blank QA/QC Results

					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
					Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Field ID	**Date**	**Matrix Type**	**Lab Report Number**	**Sample Type**																		
0445_QC301_241125	**25 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC301_241126	**26 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC301_241127	**27 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC301_241128	**28 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC301_241129	**29 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC301_241203	**03 Dec 2024**	**Water**	**1169993**	**Rinsate**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC301_241204	**04 Dec 2024**	**Water**	**1169993**	**Rinsate**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC302_241125	**25 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC302_241126	**26 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC302_241127	**27 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC302_241128	**28 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC302_241129	**29 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC401_241125	**25 Nov 2024**	**Water**	**1166588**	**Field_B**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC401_241126	**26 Nov 2024**	**Water**	**1166588**	**Field_B**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC401_241127	**27 Nov 2024**	**Water**	**1166588**	**Field_B**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC401_241128	**28 Nov 2024**	**Water**	**1166588**	**Field_B**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC401_241129	**29 Nov 2024**	**Water**	**1166588**	**Field_B**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC401_241203	**03 Dec 2024**	**Water**	**1169993**	**Field_B**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC401_241204	**04 Dec 2024**	**Water**	**1169993**	**Field_B**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC501_241126	**26 Nov 2024**	**Water**	**1166588**	**Trip_B**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*
0445_QC501_241206	**04 Dec 2024**	**Water**	**1169993**	**Trip_B**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*

Table B3 - Nov/Dec 2024 OMP Sampling Event: Blank QA/QC Results

					PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							PFAS		
					4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	Sum of PFAS (WA DER List)	Sum of PFAS
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.01	0.05	0.01	0.01	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.01	0.05	0.1
Field ID	**Date**	**Matrix Type**	**Lab Report Number**	**Sample Type**														
0445_QC301_241125	**25 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC301_241126	**26 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC301_241127	**27 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC301_241128	**28 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC301_241129	**29 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC301_241203	**03 Dec 2024**	**Water**	**1169993**	**Rinsate**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC301_241204	**04 Dec 2024**	**Water**	**1169993**	**Rinsate**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC302_241125	**25 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC302_241126	**26 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC302_241127	**27 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC302_241128	**28 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC302_241129	**29 Nov 2024**	**Water**	**1166588**	**Rinsate**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC401_241125	**25 Nov 2024**	**Water**	**1166588**	**Field_B**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC401_241126	**26 Nov 2024**	**Water**	**1166588**	**Field_B**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC401_241127	**27 Nov 2024**	**Water**	**1166588**	**Field_B**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC401_241128	**28 Nov 2024**	**Water**	**1166588**	**Field_B**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC401_241129	**29 Nov 2024**	**Water**	**1166588**	**Field_B**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC401_241203	**03 Dec 2024**	**Water**	**1169993**	**Field_B**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC401_241204	**04 Dec 2024**	**Water**	**1169993**	**Field_B**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC501_241126	**26 Nov 2024**	**Water**	**1166588**	**Trip_B**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*
0445_QC501_241206	**04 Dec 2024**	**Water**	**1169993**	**Trip_B**	*<0.01*	*<0.05*	*<0.01*	*<0.01*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*	*<0.05*	*<0.1*

Appendix E Equipment Calibration Records

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Multi Parameter Water Meter

Instrument **YSI Quatro Pro Plus**
Serial No. **18L101818**

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

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

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. D.O		0 ppm		407802	0 ppm
2. Conductivity		2760uS		414103	2760uS
3. pH7		pH 7.00		413995	pH 7.00
4. pH4		pH 4.00		414101	pH 4.00
5. ORP mV		232.46		371/398193	232.46
6. Temp °C		20.7		901272	20.7

Calibrated by: [redacted]

Calibration date: **2-Dec-24**

Next calibration due: **31-May-25**

Multi Parameter Water Meter

Instrument **YSI Quatro Pro Plus**
Serial No. **22G103267**

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

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

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. D.O		0 ppm		391223	0 ppm
2. Conductivity		2760uS		396172	2760uS
3. pH7		pH 7.00		399304	pH 7.00
4. pH4		pH 4.00		399527	pH 4.00
5. ORP mV		232.46		393379 / 387511	232.46
6. Temp °C		20.7		163377	20.7

Calibrated by: [redacted]

Calibration date: **2-Dec-24**

Next calibration due: **31-May-25**

Oil / Water Interface Meter

Instrument **Interface Meter (60M)**
Serial No. **348903**

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	9.23 v
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
		✓	
Tape Check	Cleaned	✓	
	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested.

Calibrated by: [redacted]

Calibration date: **26/11/2024**

Next calibration due: **25/01/2025**

Multi Parameter Water Meter

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Instrument YSI Quatro Pro Plus
Serial No. 22G103274

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

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

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. D.O		0 ppm		1911294839	0 ppm
2. Conductivity		2760uS		369734	2760uS
3. pH7		pH 7.00		372012	pH 7.00
4. pH4		pH 4.00		367234	pH 4.00
5. ORP mV		233.34		355023 / 361534	233.34
6. Temp °C		20.3		163377	20.3

Calibrated by: [redacted]

Calibration date: 26-Nov-24

Next calibration due: 25-May-25

Oil / Water Interface Meter

airme

Air-Met Scientific P
1300 137 06

Instrument Geotech Interface Meter (60M)
Serial No. 5365

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
		✓	
Tape Check	Cleaned	✓	
Connectors	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested.

Calibrated by: [redacted]

Calibration date: **19-Nov-24**

Next calibration due: **18-Jan-25**

Multi Parameter Water Meter 131.0 19112024M

Instrument **YSI Pro Plus**
Serial No. **18A105174**

airmet
Air-Met Scientific Pty Ltd
1800 000 744

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

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

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. D.O		0ppm		391223	0ppm
2. Conductivity		2760µS		401089	2760µS
3. pH7		pH 7		399304	pH 7
4. pH4		pH 4		399527	pH 4
5. Temp °C		19.1°C		MultTherm	19.1°C
6. ORP mV		235.98mV		MultTherm	235.98mV

Calibrated by: [redacted]

Calibration date: **19-Nov-24**

Next calibration due: **18-May-25**

Multi Parameter Water Meter

Instrument **YSI Quatro Pro Plus**
Serial No. **18L101818**

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

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

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. D.O		0 ppm		407802	0 ppm
2. Conductivity		2760uS		414103	2760uS
3. pH7		pH 7.00		413995	pH 7.00
4. pH4		pH 4.00		414101	pH 4.00
5. ORP mV		232.46		411371/398193	232.46
6. Temp °C		20.7		901272	20.7

Calibrated by: [redacted]

Calibration date: **2-Dec-24**

Next calibration due: **31-May-25**

Multi Parameter Water Meter

Instrument **YSI Quatro Pro Plus**
Serial No. **22G103267**

Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

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

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. D.O		0 ppm		391223	0 ppm
2. Conductivity		2760uS		396172	2760uS
3. pH7		pH 7.00		399304	pH 7.00
4. pH4		pH 4.00		399527	pH 4.00
5. ORP mV		232.46		393379 / 387511	232.46
6. Temp °C		20.7		163377	20.7

Calibrated by: [redacted]

Calibration date: **2-Dec-24**

Next calibration due: **31-May-25**

Oil / Water Interface Meter

Instrument Interface Meter (60M)
Serial No. 348903

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	9.23 v
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
		✓	
Tape Check	Cleaned	✓	
	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested.

Calibrated by: [redacted]

Calibration date: 26/11/2024

Next calibration due: 25/01/2025

Field YSI Check and Decontamination

PROJECT NAME: Bendigo OMP	PROJECT NO: 61393
FIELDWORK DATES: 25/11	SAMPLERS: [redacted]
TYPE OF INVESTIGATION: OMP	PROJECT MANAGER [redacted]

CALIBRATION SUMMARY

EQUIPMENT (Serial Number): YSI 18A105174
CALIBRATION STANDARD:

Date/ Time	Parameter	READING	COMMENTS
25/11 1700	Temperature (°C) 20°C	20.9°C	
↓	Conductivity (uS/cm) 2609	2,700	
	pH (7)	7.04	
	pH (4)	4.09	
	ORP (mV) 230	233	
↓	DO (mg/L)		

DECONTAMINATION SUMMARY

EQUIPMENT: YSI + PP				
1	Was the equipment decontaminated appropriately prior to sampling at each location?	(Y)	N	NA
2	Was excess soil removed by scraping, brushing or wiping with disposable towels?	(Y)	N	NA
3	Was the equipment contaminated with grease, tar or similar material?	Y	(N)	NA
	If so, was the equipment steam cleaned or rinsed with pesticide-grade acetone:hexane?	Y	N	(NA)
4	Was phosphate-free detergent used to wash the equipment?	(Y)	N	NA
5	Was the equipment rinsed with clean water?	(Y)	N	NA
6	Was the equipment then rinsed with deionised water?	(Y)	N	NA
7	Were all sample containers cleaned and acid or solvent washed prior to sample collection?	Y	N	(NA)
WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS				

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Field YSI Check and Decontamination

PROJECT NAME: Banksmeadow GMP	PROJECT NO: 67395
FIELDWORK DATES: 26/11	SAMPLERS: [redacted]
TYPE OF INVESTIGATION: GMP	PROJECT MANAGER: [redacted]

CALIBRATION SUMMARY

EQUIPMENT (Serial Number): YSI 18A105174
CALIBRATION STANDARD:

Date/ Time	Parameter	READING	COMMENTS
26/11 8.00	Temperature (°C) 20°C	20.1	✓
↓	Conductivity (uS/cm) 2630	2629	✓
	pH (7)	7.02	✓
	pH (4)	4.01	✓
	ORP (mV) 230	235	✓
↓	DO (mg/L)		

DECONTAMINATION SUMMARY

EQUIPMENT: YSI

1	Was the equipment decontaminated appropriately prior to sampling at each location?	Y	N	NA
2	Was excess soil removed by scraping, brushing or wiping with disposable towels?	Y	N	NA
3	Was the equipment contaminated with grease, tar or similar material?	Y	N	NA
	If so, was the equipment steam cleaned or rinsed with pesticide-grade acetone:hexane?	Y	N	NA
4	Was phosphate-free detergent used to wash the equipment?	Y	N	NA
5	Was the equipment rinsed with clean water?	Y	N	NA
6	Was the equipment then rinsed with deionised water?	Y	N	NA
7	Were all sample containers cleaned and acid or solvent washed prior to sample collection?	Y	N	NA

WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS

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Field YSI Check and Decontamination

PROJECT NAME: Bardon OMP	PROJECT NO: 61395
FIELDWORK DATES: 27/11	SAMPLERS: [redacted]
TYPE OF INVESTIGATION: OMP	PROJECT MANAGER: [redacted]

CALIBRATION SUMMARY

EQUIPMENT (Serial Number): YSI 22G103274
CALIBRATION STANDARD:

Date/ Time	Parameter	READING	COMMENTS
11:20	Temperature (°C) 20°C	21°C	✓
11:20	Conductivity (uS/cm) 2609	2699	✓
11:20	pH (7)	7.05	✓
11:20	pH (4)	4.01	✓
11:20	ORP (mV) 230	235	✓
	DO (mg/L)		

27/11

DECONTAMINATION SUMMARY

EQUIPMENT: YSI, IP			
1 Was the equipment decontaminated appropriately prior to sampling at each location?	(Y)	N	NA
2 Was excess soil removed by scraping, brushing or wiping with disposable towels?	(Y)	N	NA
3 Was the equipment contaminated with grease, tar or similar material?	Y	(N)	NA
If so, was the equipment steam cleaned or rinsed with pesticide-grade acetone:hexane?	Y	N	(NA)
4 Was phosphate-free detergent used to wash the equipment?	(Y)	N	NA
5 Was the equipment rinsed with clean water?	(Y)	N	NA
6 Was the equipment then rinsed with deionised water?	(Y)	N	NA
7 Were all sample containers cleaned and acid or solvent washed prior to sample collection?	Y	N	(NA)
WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS			

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Field YSI Check and Decontamination

PROJECT NAME: Penrhyn OMP	PROJECT NO: 6355
FIELDWORK DATES: 28/11	SAMPLERS: [redacted]
TYPE OF INVESTIGATION: OMP	PROJECT MANAGER: [redacted]

CALIBRATION SUMMARY

EQUIPMENT (Serial Number): YSI WQM 22G103274
CALIBRATION STANDARD:

Date/ Time	Parameter	READING	COMMENTS
	Temperature (°C)	26.0	
	Conductivity (uS/cm) ~~2107~~ 1813	~~2234~~ 1900	✓
	pH (7)	6.95	✓
	pH (4)	4.06	✓
	ORP (mV) 1207	128.0	✓
	DO (mg/L)		✓

DECONTAMINATION SUMMARY

EQUIPMENT: YSI, 1P				
1	Was the equipment decontaminated appropriately prior to sampling at each location?	(Y)	N	NA
2	Was excess soil removed by scraping, brushing or wiping with disposable towels?	(Y)	N	NA
3	Was the equipment contaminated with grease, tar or similar material?	Y	(N)	NA
	If so, was the equipment steam cleaned or rinsed with pesticide-grade acetone:hexane?	Y	N	~~NA~~
4	Was phosphate-free detergent used to wash the equipment?	(Y)	N	NA
5	Was the equipment rinsed with clean water?	(Y)	N	NA
6	Was the equipment then rinsed with deionised water?	(Y)	N	NA
7	Were all sample containers cleaned and acid or solvent washed prior to sample collection?	Y	N	(NA)
WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS				

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Field YSI Check and Decontamination

PROJECT NAME: AM Acrolein OMP	PROJECT NO: 6134
FIELDWORK DATES: 29/11	SAMPLERS: [redacted]
TYPE OF INVESTIGATION: OMP	PROJECT MANAGER: [redacted]

CALIBRATION SUMMARY

EQUIPMENT (Serial Number): YSI WQM 22G103274
CALIBRATION STANDARD:

Date/ Time	Parameter	READING	COMMENTS
	Temperature (°C)	26.0	✓
	Conductivity (uS/cm) 2813	1899	✓
	pH (7)	6.97	✓
	pH (4)	4.03	✓
	ORP (mV) 220	122	✓
	DO (mg/L)		

DECONTAMINATION SUMMARY

EQUIPMENT: YSI				
1	Was the equipment decontaminated appropriately prior to sampling at each location?	(Y)	N	NA
2	Was excess soil removed by scraping, brushing or wiping with disposable towels?	(Y)	N	NA
3	Was the equipment contaminated with grease, tar or similar material?	Y	(N)	NA
	If so, was the equipment steam cleaned or rinsed with pesticide-grade acetone:hexane?	Y	N	~~NA~~
4	Was phosphate-free detergent used to wash the equipment?	(Y)	N	NA
5	Was the equipment rinsed with clean water?	(Y)	N	NA
6	Was the equipment then rinsed with deionised water?	(Y)	N	NA
7	Were all sample containers cleaned and acid or solvent washed prior to sample collection?	Y	N	(NA)
WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS				

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Field Equipment Calibration and Decontamination

PROJECT NAME: Bandiana PMAP Delivery	PROJECT NO: 61395
FIELDWORK DATES: 3/12/24 - 4/12/24	SAMPLERS: [redacted]
TYPE OF INVESTIGATION: OMP Nov 2024	PROJECT MANAGER: [redacted]

CALIBRATION SUMMARY

EQUIPMENT: YSI
CALIBRATION STANDARD:

DATE	TIME	pH Reading	Temp Reading (°C)	DO Reading % (mg/L)	SPC Reading (µs/Cm)	ORP Reading (mV)	COMMENTS
	10:05	(7)					
3/12	[redacted]	7.01	–	10.6	3076	201.2	✓
4/12	0700	7.02	–	10.2	3029	202.1	✓

DECONTAMINATION SUMMARY

EQUIPMENT:				
1	Was the equipment decontaminated appropriately prior to sampling at each location?	(Y)	N	NA
2	Was the probe washed with PFAS free deionised water?	(Y)	N	NA
3	Was PFAS-free detergent (i.e. Liquinox) used to wash the equipment?	(Y)	N	NA
4	Was the equipment rinsed with clean water?	(Y)	N	NA
5	Was the equipment then rinsed with PFAS free deionised water?	(Y)	N	NA
WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS				

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Appendix F Laboratory Certificates and Chain of Custody

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CHAIN OF CUSTODY RECORD

Envirolab Services | Environmental Testing ABN 69 005 085 521

Sydney Laboratory
179 Magowar Road Girraween NSW 2145
02 9900 8400 · EnviroSampleNSW@envirolab.com

Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 · EnviroSampleQLD@envirolab.com

Perth Laboratory
46-48 Banksia Road Welshpool WA 6106
08 9351 4444 · Samples@ATLgroup.com.au

Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 · EnviroSampleVic@envirolab.com

Company	JBS & G Australia (VIC) P/L	Project No	VIC_0445_PFASOMP_24A
Address	PO Box 3166 Norwood SA	Project Name	Bandiana OMP
Contact Name	[redacted]	Project Manager	
Phone No		EDD Format	Facility Code
Special Directions	Sample location IDs have only been placed on the bottles based on space. Please adopt the full sample IDs listed in this COC for the sample names	Purchase Order	
		Quote ID No	

Sampler(s): [redacted]
Handed over by:
Email for Invoice:
Email for Results:

Analytes (Volumes, containers & preservatives required for each analysis)

Containers (Volumes, containers & preservatives required for each analysis)

Required Turnaround Time (TAT) (Select one of the options required)

No	Client Sample ID	Sampled Date/Time	Matrix (Solid, Water, Other)	Per- and Polyfluoroalkyl Substances (PFASs) Full - STD Level	Per- and Polyfluoroalkyl Substances (PFASs) Full - Trace Level	500mL Plastic	250mL Plastic	125mL Plastic	250mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	0445E_MW018_241128	28/11/24	Water	X							1			
2	0445E_MW020_241128	28/11/24	Water								1			
3	0445E_MW034_241128	28/11/24	Water	X							1			
4	0445E_MW046D_241128	28/11/24	Water	X							1			
5	0445E_MW046I_241128	28/11/24	Water	X							1			
6	0445S_MW051_241129	29/11/24	Water	X							1			
7	0445S_MW056_241129	29/11/24	Water								1			
8	0445S_MW304_241128	28/11/24	Water	X							1			
9	0445S_MW307_241128	28/11/24	Water	X							1			
10	0445S_MW311_241128	28/11/24	Water	X							1			
11	0445S_MW312_241128	28/11/24	Water	X							1			
12	0445S_MW315_241128	28/11/24	Water	X							1			
13	0445S_MW317_241128	28/11/24	Water	X							1			
14	0445S_MW319_241129	29/11/24	Water	X							1			
15	0445S_MW321_241128	28/11/24	Water	X							1			
16	0445S_MW323_241129	29/11/24	Water	X							1			
17	0445S_MW329_241129	29/11/24	Water	X							1			
18	0445N_MW342_241129	29/11/24	Water	X							1			

Required Turnaround Time (TAT)

- Overnight (reporting by 9am)* *Surcharge will apply
- Same day*
- 1 day*
- 2 days*
- 3 days*
- 5 days (Standard)
- Other

19	0445E_MW351_241128	28/11/24	Water		X																			1			
20	0445E_MW352_241128	28/11/24	Water		X																			1			
21	0445E_MW354_241128	28/11/24	Water	X																				1			
22	0445_MW357_241129	29/11/24	Water	X																				1			
23	0445S_MW359_241129	29/11/24	Water																					1			
24	0445_MW360_241128	28/11/24	Water	X																				1			
25	0445_MW361_241128	28/11/24	Water	X																				1			
26	0445S_MW416_241129	29/11/24	Water	X																				1			
27	0445_OTH013_241125	25/11/24	Water		X																			1			
28	0445S_SW302_241127	27/11/24	Water	X																				1			
29	0445S_SW307_241127	27/11/24	Water	X																				1			
30	0445S_SW310_241127	27/11/24	Water	X																				1			
31	0445S_SW311_241128	28/11/24	Water	X																				1			
32	0445S_SW313_241126	26/11/24	Water	X																				1			
33	0445S_SW316_241126	26/11/24	Water	X																				1			
34	0445S_SW321_241128	28/11/24	Water	X																				1			
35	0445S_SW322_241125	25/11/24	Water	X																				1			
36	0445S_SW322_241126	26/11/24	Water	X																				1			
37	0445S_SW323_241126	26/11/24	Water	X																				1			
38	0445S_SW324_241126	26/11/24	Water	X																				1			
39	0445S_SW326_241125	25/11/24	Water	X																				1			
40	0445S_SW332_241124	25/11/24	Water	X																				1			
41	0445S_SW333_241126	26/11/24	Water	X																				1			
42	0445S_SW336_241127	27/11/24	Water	X																				1			
43	0445S_SW338_241125	25/11/24	Water	X																				1			
44	0445S_SW340_241128	28/11/24	Water	X																				1			
45	0445S_SW346_241125	25/11/24	Water	X																				1			
46	0445S_SW349_241125	25/11/24	Water	X																				1			
47	0445S_SW355_241125	25/11/24	Water	X																				1			

48	0445N_SW370_241127	27/11/24	Water	X																				1				
49	0445N_SW374_241127	27/11/24	Water	X																				1				
50	0445N_SW375_241127	27/11/24	Water	X																				1				
51	0445E_SW379_241126	26/11/24	Water	X																				1				
52	0445E_SW388_241127	27/11/24	Water	X																				1				
53	0445E_SW382_241127	27/11/24	Water	X																				1				
54	0445E_SW387_241127	27/11/24	Water	X																				1				
55	0445E_SW386_241127	27/11/24	Water	X																				1				
56	0445_SW390_241127	27/11/24	Water	X																				1				
57	0445_SW393_241127	27/11/24	Water	X																				1				
58	0445_SW395_241127	27/11/24	Water	X																				1				
59	0445_SW397_241127	27/11/24	Water	X																				1				
60	0445_SW398_241127	27/11/24	Water	X																				1				
61	0445_SW400_241127	27/11/24	Water	X																				1				
62	0445_SW401_241127	27/11/24	Water	X																				1				
63	0445_SW403_241126	26/11/24	Water	X																				1				
64	0445_SW404_241126	26/11/24	Water	X																				1				
65	0445_SW405_241126	26/11/24	Water	X																				1				
66	0445_SW409_241126	26/11/24	Water	X																				1				
67	0445_SW412_241126	26/11/24	Water	X																				1				
68	0445_SW416_241126	26/11/24	Water	X																				1				
69	0445_SW424_241126	26/11/24	Water	X																				1				
70	0445_SW427_241125	25/11/24	Water	X																				1				
71	0445_SW430_241125	25/11/24	Water	X																				1				
72	0445_SW431_241125	25/11/24	Water	X																				1				
73	0445_SW432_241125	25/11/24	Water	X																				1				
74	0445_SW434_241125	25/11/24	Water	X																				1				
75	0445S_SW448_241126	26/11/24	Water	X																				1				
76	0445_SW462_241126	26/11/24	Water	X																				1				

77	0445_SW463_241126	26/11/24	Water	X																				1				
78	0445_SW470_241127	27/11/24	Water	X																				1				
79	0445_SW471_241127	27/11/24	Water	X																				1				
80	0445_SW487_241127	27/11/24	Water	X																				1				
81	0445_QC301_241125	25/11/24	Water	X																				1				
82	0445_QC302_241125	25/11/24	Water	X																				1				
83	0445_QC301_241126	26/11/24	Water	X																				1				
84	0445_QC302_241126	26/11/24	Water	X																				1				
85	0445_QC301_241127	27/11/24	Water	X																				1				
86	0445_QC302_241127	27/11/24	Water	X																				1				
87	0445_QC301_241128	28/11/24	Water	X																				1				
88	0445_QC302_241128	28/11/24	Water	X																				1				
89	0445_QC301_241129	29/11/24	Water	X																				1				
90	0445_QC302_241129	29/11/24	Water	X																				1				
91	0445_QC401_241125	25/11/24	Water	X																				1				
92	0445_QC401_241126	26/11/24	Water	X																				1				
93	0445_QC401_241127	27/11/24	Water	X																				1				
94	0445_QC401_241128	28/11/24	Water	X																				1				
95	0445_QC401_241129	29/11/24	Water	X																				1				
96	0445_QC501_241126	26/11/24	Water	X																				1				
97	0445_QC502_241126	26/11/24	Water																					1				
98	0445_QC503_241126	26/11/24	Water																					1				
99	0445_QC501_241128	28/11/24	Water																					1				
100	0445_QC502_241128	28/11/24	Water																					1				
101	0445_QC503_241128	28/11/24	Water																					1				
102	0445_QC501_241129	29/11/24	Water																					1				
103	0445_QC102_241129	29/11/24	Water	X																				1				
104	0445_QC202_241129	29/11/24	Water																					1				Forward to Envirolab
105	0445_QC101_241128	28/11/24	Water	X																				1				

106	0445_QC201_241128	28/11/24	Water																					1			Forward to Envirolab
107	0445_QC102_241128	28/11/24	Water	X																				1			
108	0445_QC202_241128	28/11/24	Water																					1			Forward to Envirolab
109	0445_QC101_241129	29/11/24	Water	X																				1			
110	0445_QC201_241129	29/11/24	Water																					1			Forward to Envirolab
111	0445_QC101_241125	25/11/24	Water																					1			
112	0445_QC201_241125	25/11/24	Water																					1			Forward to Envirolab
113	0445_QC101_241126	26/11/24	Water	X																				1			
114	0445_QC201_241126	26/11/24	Water																					1			Forward to Envirolab
115	0445_QC102_241126	26/11/24	Water	X																				1			
116	0445_QC202_241126	26/11/24	Water																					1			Forward to Envirolab
117	0445_QC103_241126	26/11/24	Water	X																				1			
118	0445_QC203_241126	26/11/24	Water																					1			Forward to Envirolab
119	0445_QC102_241127	27/11/24	Water	X																				1			
120	0445_QC202_241127	27/11/24	Water																					1			Forward to Envirolab
121																													
122																													
123																													
124																													
125																													
126																													
127																													
128																													
129																													
130																													
	Add Rows		Total Counts	88	3																			120					

Method of Shipment	= Courier #		= Hand Delivered		= Postal	Name																							
Laboratory Use Only	Received By			SYD | BNE | MEL | PER | ADL | NTL | DRW		Signature																							
	Received By			SYD | BNE | MEL | PER | ADL | NTL | DRW		Signature																							

Signature																													
Date																													
Time																													
Temperature																													
Report Nº																													

CHAIN OF CUSTODY RECORD

Eurofins | Environment Testing ABN 50 005 085 521

Sydney Laboratory
179 Magowar Road Girraween NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

Perth Laboratory
46-48 Banksia Road Welshpool WA 6106
08 6253 4444 Samples@ARLgroup.com.au

Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

Company	JBS & G Australia (VIC) P/L	Project №	VIC_0445_PFASCOMP_24A	Project Manager	
Address	PO Box 3166 Norwood SA	Project Name	Bandiana ONP	EDD Format eSdat / QuIS etc	Facility Code
Contact Name	[redacted]				
Phone №					
Special Directions					
Purchase Order					
Quote ID №					

| | | | | |

www.eurofins.com.au EnviroSales@eurofinsanz.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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 NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name: [redacted]
Contact name:
Project name:
Project ID: VIC_0445_PFASOMP_24A
Turnaround time: 5 Day
Date/Time received Dec 2, 2024 2:21 PM
Eurofins reference 1166588

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 : 10 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

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

[redacted]

Note: A copy of these results will also be delivered to the general JBS & G Australia (VIC) P/L email address.

JBS & G Australia (VIC) P/L
PO Box 3166
Norwood
SA 5067

NATA Accredited
Accreditation Number 1261
Site Number 1254

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Attention: [redacted]

Report **1166588-W-V2**
Project name Bandiana OMP
Project ID VIC_0445_PFASOMP_24A
Received Date Dec 02, 2024

Client Sample ID			**0445E_MW018_241128**	**0445E_MW034_241128**	**0445E_MW046D_241128**	**0445E_MW046I_241128**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M24-De0002413**	**M24-De0002414**	**M24-De0002415**	**M24-De0002416**
Date Sampled			**Nov 28, 2024**	**Nov 28, 2024**	**Nov 28, 2024**	**Nov 28, 2024**
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	0.02	0.06	0.06
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	[N09]0.09	[N09]0.29	[N09]0.30
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	[N09]0.01	[N09]0.02	[N09]0.03
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.01	[N09]0.03	[N09]0.08	[N09]0.08
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	121	130	93	82
13C5-PFPeA (surr.)	1	%	123	115	93	85
13C5-PFHxA (surr.)	1	%	102	102	149	140
13C4-PFHpA (surr.)	1	%	102	103	149	142
13C8-PFOA (surr.)	1	%	85	89	120	113
13C5-PFNA (surr.)	1	%	77	78	115	112
13C6-PFDA (surr.)	1	%	69	74	110	109
13C2-PFUnDA (surr.)	1	%	55	65	104	101
13C2-PFDoDA (surr.)	1	%	56	70	123	122
13C2-PFTeDA (surr.)	1	%	70	72	103	108
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	73	80	70	86
D3-N-MeFOSA (surr.)	1	%	125	168	22	33

Client Sample ID			0445E_MW018_241128	0445E_MW034_241128	0445E_MW046D_241128	0445E_MW046I_241128
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002413	M24-De0002414	M24-De0002415	M24-De0002416
Date Sampled			Nov 28, 2024	Nov 28, 2024	Nov 28, 2024	Nov 28, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D5-N-EtFOSA (surr.)	1	%	135	177	19	32
D7-N-MeFOSE (surr.)	1	%	91	125	33	83
D9-N-EtFOSE (surr.)	1	%	77	99	47	75
D5-N-EtFOSAA (surr.)	1	%	62	81	109	109
D3-N-MeFOSAA (surr.)	1	%	57	70	93	89
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.07	0.05	0.12	0.12
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.03	0.02	0.05	0.05
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.07	[N09]0.06	[N09]0.18	[N09]0.18
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.53	[N09]0.56	[N09]1.6	[N09]1.8
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.02	[N09]0.04	[N09]0.09	[N09]0.09
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.63	[N09]1.2	[N09]2.6	[N09]3.2
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	89	97	127	123
18O2-PFHxS (surr.)	1	%	86	84	94	82
13C8-PFOS (surr.)	1	%	76	74	90	80
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	81	86	124	120
13C2-6:2 FTSA (surr.)	1	%	78	87	117	112
13C2-8:2 FTSA (surr.)	1	%	61	68	104	98
13C2-10:2 FTSA (surr.)	1	%	50	62	97	101
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	1.16	1.76	4.2	5
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.64	1.23	2.68	3.28
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	1.17	1.79	4.28	5.08
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	1.24	1.96	4.77	5.59
Sum of PFASs (n=30)*	0.1	ug/L	1.36	2.08	5.09	5.91

Client Sample ID			0445S_MW051_241129	0445S_MW304_241128	0445S_MW307_241128	0445S_MW311_241128
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002417	M24-De0002418	M24-De0002419	M24-De0002420
Date Sampled			Nov 29, 2024	Nov 28, 2024	Nov 28, 2024	Nov 28, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	0.25	< 0.05	21	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.30	< 0.01	84	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	[N09]0.60	[N09]0.02	[N09]200	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.07	< 0.01	[N09]32	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.15	< 0.01	[N09]55	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	0.03	< 0.01	0.93	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	87	112	116	77
13C5-PFPeA (surr.)	1	%	102	125	120	99
13C5-PFHxA (surr.)	1	%	95	125	118	76
13C4-PFHpA (surr.)	1	%	101	128	121	78
13C8-PFOA (surr.)	1	%	104	112	117	67
13C5-PFNA (surr.)	1	%	101	113	23	62
13C6-PFDA (surr.)	1	%	92	111	13	58
13C2-PFUnDA (surr.)	1	%	95	99	98	55
13C2-PFDoDA (surr.)	1	%	83	112	107	64
13C2-PFTeDA (surr.)	1	%	88	91	99	60
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	84	63	113	61
D3-N-MeFOSA (surr.)	1	%	24	34	152	60
D5-N-EtFOSA (surr.)	1	%	18	55	153	75
D7-N-MeFOSE (surr.)	1	%	47	55	141	108
D9-N-EtFOSE (surr.)	1	%	44	57	136	79
D5-N-EtFOSAA (surr.)	1	%	61	93	105	56
D3-N-MeFOSAA (surr.)	1	%	71	86	82	47
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.24	< 0.01	110	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	0.01	< 0.01	< 0.125	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.15	< 0.01	79	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.13	< 0.01	110	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.71	[N09]0.14	[N09]610	[N09]0.02
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.06	[N09]< 0.01	[N09]44	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]3.0	[N09]1.6	[N09]170	[N09]0.02
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.125	< 0.01

Client Sample ID			0445S_MW051_241129	0445S_MW304_241128	0445S_MW307_241128	0445S_MW311_241128
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002417	M24-De0002418	M24-De0002419	M24-De0002420
Date Sampled			Nov 29, 2024	Nov 28, 2024	Nov 28, 2024	Nov 28, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
13C3-PFBS (surr.)	1	%	101	125	97	82
18O2-PFHxS (surr.)	1	%	103	86	104	70
13C8-PFOS (surr.)	1	%	70	71	129	56
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	0.94	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	130	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	0.03	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	88	100	60	62
13C2-6:2 FTSA (surr.)	1	%	90	104	196	62
13C2-8:2 FTSA (surr.)	1	%	104	96	22	53
13C2-10:2 FTSA (surr.)	1	%	98	97	93	54
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	3.71	1.74	780	0.04
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	3.15	1.6	225	0.02
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	3.86	1.74	835	0.04
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	5.32	1.76	1412.03	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	5.7	1.76	1646.9	< 0.1

Client Sample ID			0445S_MW312_241128	0445S_MW315_241128	0445S_MW317_241126	0445S_MW319_241129
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002421	M24-De0002422	M24-De0002423	M24-De0002424
Date Sampled			Nov 28, 2024	Nov 28, 2024	Nov 26, 2024	Nov 29, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	[N09]0.02	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	99	143	17	123
13C5-PFPeA (surr.)	1	%	105	133	15	114
13C5-PFHxA (surr.)	1	%	86	118	67	104
13C4-PFHpA (surr.)	1	%	91	113	74	106
13C8-PFOA (surr.)	1	%	92	101	80	89
13C5-PFNA (surr.)	1	%	87	97	86	78
13C6-PFDA (surr.)	1	%	96	91	75	71

Client Sample ID			0445S_MW312_241128	0445S_MW315_241128	0445S_MW317_241126	0445S_MW319_241129
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002421	M24-De0002422	M24-De0002423	M24-De0002424
Date Sampled			Nov 28, 2024	Nov 28, 2024	Nov 26, 2024	Nov 29, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C2-PFUnDA (surr.)	1	%	81	77	96	57
13C2-PFDoDA (surr.)	1	%	76	81	65	63
13C2-PFTeDA (surr.)	1	%	102	55	56	51
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	114	41	69	70
D3-N-MeFOSA (surr.)	1	%	131	24	124	63
D5-N-EtFOSA (surr.)	1	%	140	30	109	56
D7-N-MeFOSE (surr.)	1	%	90	31	74	90
D9-N-EtFOSE (surr.)	1	%	98	33	79	67
D5-N-EtFOSAA (surr.)	1	%	60	85	66	61
D3-N-MeFOSAA (surr.)	1	%	69	77	55	62
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.02	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.10	< 0.01	[N09]0.02	[N09]0.03
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.01	< 0.01	[N09]0.03	[N09]0.14
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	97	109	94	88
18O2-PFHxS (surr.)	1	%	102	106	112	80
13C8-PFOS (surr.)	1	%	79	89	91	70
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	49	94	90	80
13C2-6:2 FTSA (surr.)	1	%	57	90	120	73
13C2-8:2 FTSA (surr.)	1	%	94	80	92	60
13C2-10:2 FTSA (surr.)	1	%	78	73	56	58

Client Sample ID			0445S_MW312_241128	0445S_MW315_241128	0445S_MW317_241126	0445S_MW319_241129
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002421	M24-De0002422	M24-De0002423	M24-De0002424
Date Sampled			Nov 28, 2024	Nov 28, 2024	Nov 26, 2024	Nov 29, 2024
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.11	< 0.01	0.05	0.17
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.01	< 0.01	0.03	0.14
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.11	< 0.01	0.05	0.17
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.14	< 0.05	0.05	0.17
Sum of PFASs (n=30)*	0.1	ug/L	0.16	< 0.1	< 0.1	0.17

Client Sample ID			0445S_MW321_241128	0445S_MW323_241129	0445S_MW329_241129	0445N_MW342_241129
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002425	M24-De0002426	M24-De0002427	M24-De0002428
Date Sampled			Nov 28, 2024	Nov 29, 2024	Nov 29, 2024	Nov 29, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	0.34	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	1.1	< 0.01	< 0.01	0.32
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	[N09]12	< 0.01	< 0.01	[N09]1.5
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]2.2	< 0.01	< 0.01	[N09]0.10
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]15	< 0.01	< 0.01	[N09]0.30
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	[N09]1.9	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.625	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	148	77	64	129
13C5-PFPeA (surr.)	1	%	118	84	98	143
13C5-PFHxA (surr.)	1	%	126	83	122	90
13C4-PFHpA (surr.)	1	%	111	97	153	126
13C8-PFOA (surr.)	1	%	115	102	124	91
13C5-PFNA (surr.)	1	%	98	89	114	99
13C6-PFDA (surr.)	1	%	95	82	104	93
13C2-PFUnDA (surr.)	1	%	73	68	93	86
13C2-PFDoDA (surr.)	1	%	102	71	93	101
13C2-PFTeDA (surr.)	1	%	94	49	63	85
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	94	77	84	92

Client Sample ID			0445S_MW321_241128	0445S_MW323_241129	0445S_MW329_241129	0445N_MW342_241129
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002425	M24-De0002426	M24-De0002427	M24-De0002428
Date Sampled			Nov 28, 2024	Nov 29, 2024	Nov 29, 2024	Nov 29, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D3-N-MeFOSA (surr.)	1	%	140	65	57	79
D5-N-EtFOSA (surr.)	1	%	143	72	65	91
D7-N-MeFOSE (surr.)	1	%	174	121	109	88
D9-N-EtFOSE (surr.)	1	%	133	86	94	84
D5-N-EtFOSAA (surr.)	1	%	104	62	80	86
D3-N-MeFOSAA (surr.)	1	%	45	57	58	77
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	3.4	< 0.01	0.10	0.96
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.625	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	1.1	< 0.01	0.04	0.69
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	5.6	< 0.01	[N09]0.08	[N09]0.97
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]250	< 0.01	[N09]0.31	[N09]8.0
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]47	< 0.01	< 0.01	[N09]0.29
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]1100	< 0.01	[N09]0.04	[N09]3.6
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.625	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	95	100	142	99
18O2-PFHxS (surr.)	1	%	116	100	118	84
13C8-PFOS (surr.)	1	%	117	84	117	76
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	1.2	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	0.64	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	106	77	117	105
13C2-6:2 FTSA (surr.)	1	%	81	85	111	98
13C2-8:2 FTSA (surr.)	1	%	24	76	92	87
13C2-10:2 FTSA (surr.)	1	%	91	62	77	72
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	1350	< 0.01	0.35	11.6
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	1115	< 0.01	0.04	3.9
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	1365	< 0.01	0.35	11.9
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	1385.88	< 0.05	0.45	14.78
Sum of PFASs (n=30)*	0.1	ug/L	1441.48	< 0.1	0.57	16.73

Client Sample ID			0445E_MW351_241128	0445E_MW352_241128	0445E_MW354_241128	0445_MW357_241129
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002429	M24-De0002430	M24-De0002431	M24-De0002432
Date Sampled			Nov 28, 2024	Nov 28, 2024	Nov 28, 2024	Nov 29, 2024
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	-	-	[N09]0.02	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	-	-	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	-	-	< 0.01	< 0.01
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	%	-	-	151	138
13C5-PFPeA (surr.)	1	%	-	-	172	123
13C5-PFHxA (surr.)	1	%	-	-	116	111
13C4-PFHpA (surr.)	1	%	-	-	117	106
13C8-PFOA (surr.)	1	%	-	-	96	86
13C5-PFNA (surr.)	1	%	-	-	92	81
13C6-PFDA (surr.)	1	%	-	-	82	69
13C2-PFUnDA (surr.)	1	%	-	-	61	60
13C2-PFDoDA (surr.)	1	%	-	-	70	49
13C2-PFTeDA (surr.)	1	%	-	-	76	21
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	-	-	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	-	-	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	-	-	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	-	-	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	-	-	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	-	-	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	-	-	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	-	-	71	59
D3-N-MeFOSA (surr.)	1	%	-	-	75	41
D5-N-EtFOSA (surr.)	1	%	-	-	80	37
D7-N-MeFOSE (surr.)	1	%	-	-	83	65
D9-N-EtFOSE (surr.)	1	%	-	-	77	54
D5-N-EtFOSAA (surr.)	1	%	-	-	77	59
D3-N-MeFOSAA (surr.)	1	%	-	-	64	56
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	-	-	0.02	< 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	-	-	[N09]0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	-	-	[N09]0.09	[N09]0.04
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	-	-	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	-	-	[N09]0.17	[N09]0.02
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	-	-	< 0.01	< 0.01

Client Sample ID			0445E_MW351_241128	0445E_MW352_241128	0445E_MW354_241128	0445_MW357_241129
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002429	M24-De0002430	M24-De0002431	M24-De0002432
Date Sampled			Nov 28, 2024	Nov 28, 2024	Nov 28, 2024	Nov 29, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
13C3-PFBS (surr.)	1	%	-	-	109	107
18O2-PFHxS (surr.)	1	%	-	-	105	97
13C8-PFOS (surr.)	1	%	-	-	77	70
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	-	-	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	-	-	94	89
13C2-6:2 FTSA (surr.)	1	%	-	-	88	79
13C2-8:2 FTSA (surr.)	1	%	-	-	74	67
13C2-10:2 FTSA (surr.)	1	%	-	-	63	52
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	-	-	0.26	0.06
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	-	-	0.17	0.02
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	-	-	0.26	0.06
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	-	-	0.3	0.06
Sum of PFASs (n=30)*	0.1	ug/L	-	-	0.31	< 0.1
PFASs Summations						
Sum (PFHxS + PFOS)*	0.001	ug/L	0.047	0.024	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.001	ug/L	0.053	0.026	-	-
Sum of PFASs (n=30)*	0.005	ug/L	0.082	0.03	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	0.001	ug/L	0.026	0.018	-	-
Sum of WA DWER PFAS (n=10)*	0.005	ug/L	0.077	0.028	-	-
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	-	-
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.005	ug/L	< 0.005	< 0.005	-	-
13C8-FOSA (surr.)	1	%	58	113	-	-
D3-N-MeFOSA (surr.)	1	%	37	23	-	-
D5-N-EtFOSA (surr.)	1	%	147	24	-	-
D7-N-MeFOSE (surr.)	1	%	101	157	-	-
D9-N-EtFOSE (surr.)	1	%	116	29	-	-
D5-N-EtFOSAA (surr.)	1	%	27	97	-	-
D3-N-MeFOSAA (surr.)	1	%	30	102	-	-

Client Sample ID			0445E_MW351_241128	0445E_MW352_241128	0445E_MW354_241128	0445_MW357_241129
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002429	M24-De0002430	M24-De0002431	M24-De0002432
Date Sampled			Nov 28, 2024	Nov 28, 2024	Nov 28, 2024	Nov 29, 2024
Test/Reference	LOR	Unit				
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	0.003	< 0.001	-	-
Perfluorohexanoic acid (PFHxA)[N11]	0.001	ug/L	[N09]0.007	< 0.001	-	-
Perfluoroheptanoic acid (PFHpA)[N11]	0.001	ug/L	[N09]0.002	< 0.001	-	-
Perfluorooctanoic acid (PFOA)[N11]	0.001	ug/L	[N09]0.006	[N09]0.002	-	-
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 (PFTrDA)[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	%	84	110	-	-
13C5-PFPeA (surr.)	1	%	114	118	-	-
13C5-PFHxA (surr.)	1	%	86	104	-	-
13C4-PFHpA (surr.)	1	%	91	115	-	-
13C8-PFOA (surr.)	1	%	71	112	-	-
13C5-PFNA (surr.)	1	%	60	108	-	-
13C6-PFDA (surr.)	1	%	54	101	-	-
13C2-PFUnDA (surr.)	1	%	48	97	-	-
13C2-PFDoDA (surr.)	1	%	37	92	-	-
13C2-PFTeDA (surr.)	1	%	22	135	-	-
Perfluoroalkyl sulfonic acids (PFSAs)- Trace						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.001	ug/L	0.007	0.002	-	-
Perfluorononanesulfonic acid (PFNS)[N15]	0.001	ug/L	< 0.001	< 0.001	-	-
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.001	ug/L	< 0.001	< 0.001	-	-
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.001	ug/L	[N09]0.005	[N09]0.002	-	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.001	ug/L	[N09]0.027	[N09]0.008	-	-
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.001	ug/L	< 0.001	< 0.001	-	-
Perfluorooctanesulfonic acid (PFOS)[N11]	0.001	ug/L	[N09]0.020	[N09]0.016	-	-
Perfluorodecanesulfonic acid (PFDS)[N15]	0.001	ug/L	< 0.001	< 0.001	-	-
13C3-PFBS (surr.)	1	%	107	131	-	-
18O2-PFHxS (surr.)	1	%	96	136	-	-
13C8-PFOS (surr.)	1	%	55	104	-	-
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- 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	%	54	124	-	-
13C2-6:2 FTSA (surr.)	1	%	70	119	-	-
13C2-8:2 FTSA (surr.)	1	%	31	79	-	-
13C2-10:2 FTSA (surr.)	1	%	19	76	-	-

Client Sample ID			0445_MW360_241128	0445_MW361_241128	0445S_MW416_241129	0445_OTH019_241125
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002433	M24-De0002434	M24-De0002435	M24-De0002436
Date Sampled			Nov 28, 2024	Nov 28, 2024	Nov 29, 2024	Nov 25, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	-
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	0.02	0.01	-
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	[N09]0.02	[N09]0.05	-
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	[N09]0.01	< 0.01	-
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	[N09]0.04	[N09]0.01	-
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 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	%	82	87	68	-
13C5-PFPeA (surr.)	1	%	84	85	135	-
13C5-PFHxA (surr.)	1	%	82	83	120	-
13C4-PFHpA (surr.)	1	%	85	79	131	-
13C8-PFOA (surr.)	1	%	65	68	137	-
13C5-PFNA (surr.)	1	%	62	63	127	-
13C6-PFDA (surr.)	1	%	58	58	113	-
13C2-PFUnDA (surr.)	1	%	51	50	127	-
13C2-PFDoDA (surr.)	1	%	57	55	134	-
13C2-PFTeDA (surr.)	1	%	79	88	195	-
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	%	60	63	91	-
D3-N-MeFOSA (surr.)	1	%	149	116	13	-
D5-N-EtFOSA (surr.)	1	%	155	140	15	-
D7-N-MeFOSE (surr.)	1	%	90	97	57	-
D9-N-EtFOSE (surr.)	1	%	82	79	66	-
D5-N-EtFOSAA (surr.)	1	%	60	57	126	-
D3-N-MeFOSAA (surr.)	1	%	53	53	134	-
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	0.01	< 0.01	-
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	-
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	-
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.01	< 0.01	< 0.01	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.15	[N09]0.13	[N09]0.18	-
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.01	[N09]0.01	[N09]0.03	-
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.16	[N09]0.26	[N09]1.0	-
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	-

Client Sample ID			0445_MW360_241128	0445_MW361_241128	0445S_MW416_241129	0445_OTH019_241125
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002433	M24-De0002434	M24-De0002435	M24-De0002436
Date Sampled			Nov 28, 2024	Nov 28, 2024	Nov 29, 2024	Nov 25, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
13C3-PFBS (surr.)	1	%	80	82	112	-
18O2-PFHxS (surr.)	1	%	66	66	117	-
13C8-PFOS (surr.)	1	%	57	58	102	-
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	-
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	0.37	-
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	%	65	65	104	-
13C2-6:2 FTSA (surr.)	1	%	60	59	124	-
13C2-8:2 FTSA (surr.)	1	%	50	53	132	-
13C2-10:2 FTSA (surr.)	1	%	51	53	172	-
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.31	0.39	1.18	-
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.16	0.3	1.01	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.31	0.43	1.19	-
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.31	0.49	1.62	-
Sum of PFASs (n=30)*	0.1	ug/L	0.33	0.5	1.65	-
PFASs Summations						
Sum (PFHxS + PFOS)*	0.001	ug/L	-	-	-	0.313
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.001	ug/L	-	-	-	0.32
Sum of PFASs (n=30)*	0.005	ug/L	-	-	-	0.399
Sum of US EPA PFAS (PFOS + PFOA)*	0.001	ug/L	-	-	-	0.1
Sum of WA DWER PFAS (n=10)*	0.005	ug/L	-	-	-	0.359
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	%	-	-	-	65
D3-N-MeFOSA (surr.)	1	%	-	-	-	31
D5-N-EtFOSA (surr.)	1	%	-	-	-	21
D7-N-MeFOSE (surr.)	1	%	-	-	-	169
D9-N-EtFOSE (surr.)	1	%	-	-	-	140
D5-N-EtFOSAA (surr.)	1	%	-	-	-	72
D3-N-MeFOSAA (surr.)	1	%	-	-	-	79

Client Sample ID			0445_MW360_241128	0445_MW361_241128	0445S_MW416_241129	0445_OTH019_241125
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002433	M24-De0002434	M24-De0002435	M24-De0002436
Date Sampled			Nov 28, 2024	Nov 28, 2024	Nov 29, 2024	Nov 25, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs) - Trace						
Perfluorobutanoic acid (PFBA)[N11]	0.005	ug/L	-	-	-	0.006
Perfluoropentanoic acid (PFPeA)[N11]	0.001	ug/L	-	-	-	0.002
Perfluorohexanoic acid (PFHxA)[N11]	0.001	ug/L	-	-	-	[N09]0.014
Perfluoroheptanoic acid (PFHpA)[N11]	0.001	ug/L	-	-	-	[N09]0.002
Perfluorooctanoic acid (PFOA)[N11]	0.001	ug/L	-	-	-	[N09]0.007
Perfluorononanoic acid (PFNA)[N11]	0.001	ug/L	-	-	-	< 0.001
Perfluorodecanoic acid (PFDA)[N11]	0.001	ug/L	-	-	-	< 0.001
Perfluorotridecanoic acid (PFTrDA)[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	%	-	-	-	94
13C5-PFPeA (surr.)	1	%	-	-	-	106
13C5-PFHxA (surr.)	1	%	-	-	-	89
13C4-PFHpA (surr.)	1	%	-	-	-	100
13C8-PFOA (surr.)	1	%	-	-	-	80
13C5-PFNA (surr.)	1	%	-	-	-	92
13C6-PFDA (surr.)	1	%	-	-	-	88
13C2-PFUnDA (surr.)	1	%	-	-	-	78
13C2-PFDoDA (surr.)	1	%	-	-	-	57
13C2-PFTeDA (surr.)	1	%	-	-	-	23
Perfluoroalkyl sulfonic acids (PFSAs)- Trace						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.001	ug/L	-	-	-	0.015
Perfluorononanesulfonic acid (PFNS)[N15]	0.001	ug/L	-	-	-	< 0.001
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.001	ug/L	-	-	-	0.005
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.001	ug/L	-	-	-	[N09]0.026
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.001	ug/L	-	-	-	[N09]0.22
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.001	ug/L	-	-	-	[N09]0.009
Perfluorooctanesulfonic acid (PFOS)[N11]	0.001	ug/L	-	-	-	[N09]0.093
Perfluorodecanesulfonic acid (PFDS)[N15]	0.001	ug/L	-	-	-	< 0.001
13C3-PFBS (surr.)	1	%	-	-	-	117
18O2-PFHxS (surr.)	1	%	-	-	-	109
13C8-PFOS (surr.)	1	%	-	-	-	89
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- 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	%	-	-	-	100
13C2-6:2 FTSA (surr.)	1	%	-	-	-	103
13C2-8:2 FTSA (surr.)	1	%	-	-	-	68
13C2-10:2 FTSA (surr.)	1	%	-	-	-	48

Client Sample ID			0445S_SW302_241127	0445S_SW307_241127	0445S_SW310_241127	0445S_SW311_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002437	M24-De0002438	M24-De0002439	M24-De0002440
Date Sampled			Nov 27, 2024	Nov 27, 2024	Nov 27, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	0.35	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.30	< 0.01	< 0.01	0.02
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	[N09]0.24	< 0.01	< 0.01	0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.03	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	61	46	45	47
13C5-PFPeA (surr.)	1	%	87	40	55	121
13C5-PFHxA (surr.)	1	%	77	71	82	99
13C4-PFHpA (surr.)	1	%	73	98	109	107
13C8-PFOA (surr.)	1	%	78	89	99	117
13C5-PFNA (surr.)	1	%	77	77	83	116
13C6-PFDA (surr.)	1	%	73	66	64	105
13C2-PFUnDA (surr.)	1	%	53	51	47	76
13C2-PFDoDA (surr.)	1	%	56	50	50	68
13C2-PFTeDA (surr.)	1	%	31	26	50	36
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	56	63	55	51
D3-N-MeFOSA (surr.)	1	%	75	73	83	13
D5-N-EtFOSA (surr.)	1	%	78	86	109	16
D7-N-MeFOSE (surr.)	1	%	81	73	61	30
D9-N-EtFOSE (surr.)	1	%	61	60	56	29
D5-N-EtFOSAA (surr.)	1	%	62	65	60	82
D3-N-MeFOSAA (surr.)	1	%	55	55	48	74
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.53	0.02	< 0.01	0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.73	0.02	0.01	0.02
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.10	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.42	[N09]0.04	[N09]0.03	[N09]0.02
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.03	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]3.0	[N09]0.11	[N09]0.09	[N09]0.31
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			0445S_SW302_241127	0445S_SW307_241127	0445S_SW310_241127	0445S_SW311_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002437	M24-De0002438	M24-De0002439	M24-De0002440
Date Sampled			Nov 27, 2024	Nov 27, 2024	Nov 27, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
13C3-PFBS (surr.)	1	%	69	100	106	128
18O2-PFHxS (surr.)	1	%	100	107	108	137
13C8-PFOS (surr.)	1	%	67	89	76	122
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	59	75	90	95
13C2-6:2 FTSA (surr.)	1	%	101	105	124	164
13C2-8:2 FTSA (surr.)	1	%	68	61	64	96
13C2-10:2 FTSA (surr.)	1	%	51	45	44	62
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	3.42	0.15	0.12	0.33
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	3.03	0.11	0.09	0.31
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	3.45	0.15	0.12	0.33
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	4.88	0.17	0.12	0.37
Sum of PFASs (n=30)*	0.1	ug/L	5.74	0.19	0.13	0.39

Client Sample ID			0445S_SW313_241125	0445S_SW316_241126	0445S_SW321_241126	0445S_SW322_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002441	M24-De0002442	M24-De0002443	M24-De0002445
Date Sampled			Nov 25, 2024	Nov 26, 2024	Nov 26, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	0.67	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	1.5	< 0.01	< 0.01	0.06
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	2.6	0.01	< 0.01	[N09]0.06
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.58	< 0.01	< 0.01	[N09]0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]1.2	< 0.01	< 0.01	[N09]0.02
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	0.53	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	0.04	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	118	56	85	87
13C5-PFPeA (surr.)	1	%	127	56	125	98
13C5-PFHxA (surr.)	1	%	116	97	142	125
13C4-PFHpA (surr.)	1	%	76	127	153	134
13C8-PFOA (surr.)	1	%	107	111	120	100
13C5-PFNA (surr.)	1	%	98	102	100	83
13C6-PFDA (surr.)	1	%	71	84	84	71

Client Sample ID			0445S_SW313_241125	0445S_SW316_241126	0445S_SW321_241126	0445S_SW322_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002441	M24-De0002442	M24-De0002443	M24-De0002445
Date Sampled			Nov 25, 2024	Nov 26, 2024	Nov 26, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C2-PFUnDA (surr.)	1	%	119	65	63	57
13C2-PFDoDA (surr.)	1	%	116	65	59	60
13C2-PFTeDA (surr.)	1	%	102	41	23	31
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	110	58	69	67
D3-N-MeFOSA (surr.)	1	%	74	28	50	36
D5-N-EtFOSA (surr.)	1	%	72	37	63	43
D7-N-MeFOSE (surr.)	1	%	82	40	62	64
D9-N-EtFOSE (surr.)	1	%	84	37	53	53
D5-N-EtFOSAA (surr.)	1	%	80	78	70	62
D3-N-MeFOSAA (surr.)	1	%	93	68	62	55
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.33	0.02	< 0.01	0.02
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	0.20	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.14	0.02	< 0.01	0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.45	< 0.01	< 0.01	[N09]0.02
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]6.3	[N09]0.05	[N09]0.03	[N09]0.20
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.52	< 0.01	< 0.01	[N09]0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]25	[N09]0.25	[N09]0.50	[N09]1.0
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	0.06	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	83	123	144	127
18O2-PFHxS (surr.)	1	%	102	125	128	109
13C8-PFOS (surr.)	1	%	101	96	98	84
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	91	102	151	93
13C2-6:2 FTSA (surr.)	1	%	86	137	120	94
13C2-8:2 FTSA (surr.)	1	%	111	79	85	61
13C2-10:2 FTSA (surr.)	1	%	148	51	53	45

Client Sample ID			0445S_SW313_241125	0445S_SW316_241126	0445S_SW321_241126	0445S_SW322_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002441	M24-De0002442	M24-De0002443	M24-De0002445
Date Sampled			Nov 25, 2024	Nov 26, 2024	Nov 26, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	31.3	0.3	0.53	1.2
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	26.2	0.25	0.5	1.02
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	32.5	0.3	0.53	1.22
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	38.18	0.33	0.53	1.37
Sum of PFASs (n=30)*	0.1	ug/L	40.12	0.35	0.53	1.41

Client Sample ID			0445S_SW323_241126	0445S_SW324_241126	0445S_SW326_241125	0445S_SW332_241124
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002446	M24-De0002447	M24-De0002448	M24-De0002449
Date Sampled			Nov 26, 2024	Nov 26, 2024	Nov 25, 2024	Nov 25, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	0.06	< 0.05	0.29
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.11	0.13	0.11	0.60
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	[N09]0.06	0.10	0.14	[N09]3.1
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.01	[N09]0.02	[N09]0.05	[N09]0.31
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.02	[N09]0.03	[N09]0.08	[N09]0.72
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	98	91	85	66
13C5-PFPeA (surr.)	1	%	104	98	92	83
13C5-PFHxA (surr.)	1	%	130	100	96	117
13C4-PFHpA (surr.)	1	%	140	106	108	79
13C8-PFOA (surr.)	1	%	113	86	90	82
13C5-PFNA (surr.)	1	%	85	87	94	86
13C6-PFDA (surr.)	1	%	66	69	74	70
13C2-PFUnDA (surr.)	1	%	49	62	68	98
13C2-PFDoDA (surr.)	1	%	48	51	61	94
13C2-PFTeDA (surr.)	1	%	26	62	65	100
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	59	86	94	104

Client Sample ID			0445S_SW323_241126	0445S_SW324_241126	0445S_SW326_241125	0445S_SW332_241124
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M24-De0002446**	**M24-De0002447**	**M24-De0002448**	**M24-De0002449**
Date Sampled			**Nov 26, 2024**	**Nov 26, 2024**	**Nov 25, 2024**	**Nov 25, 2024**
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D3-N-MeFOSA (surr.)	1	%	33	33	27	59
D5-N-EtFOSA (surr.)	1	%	33	37	30	60
D7-N-MeFOSE (surr.)	1	%	53	44	50	68
D9-N-EtFOSE (surr.)	1	%	39	42	50	71
D5-N-EtFOSAA (surr.)	1	%	58	57	59	80
D3-N-MeFOSAA (surr.)	1	%	51	63	65	86
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.02	[N09]0.05	[N09]0.05	1.4
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	[N09]0.01	0.02
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.02	0.06	0.03	0.52
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.02	[N09]0.03	[N09]0.06	[N09]1.5
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.20	[N09]0.28	[N09]0.64	[N09]9.6
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.01	[N09]0.01	[N09]0.04	[N09]0.89
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]1.1	[N09]0.91	[N09]2.5	[N09]13
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	139	106	102	120
18O2-PFHxS (surr.)	1	%	118	91	95	102
13C8-PFOS (surr.)	1	%	83	72	77	103
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	117	96	89	89
13C2-6:2 FTSA (surr.)	1	%	103	85	91	81
13C2-8:2 FTSA (surr.)	1	%	62	63	68	90
13C2-10:2 FTSA (surr.)	1	%	38	52	56	130
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	1.3	1.19	3.14	22.6
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	1.12	0.94	2.58	13.72
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	1.32	1.22	3.22	23.32
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	1.52	1.58	3.57	29.02
Sum of PFASs (n=30)*	0.1	ug/L	1.57	1.68	3.72	31.95

Client Sample ID			0445S_SW333_241126	0445S_SW336_241127	0445S_SW338_241125	0445S_SW340_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002450	M24-De0002451	M24-De0002452	M24-De0002453
Date Sampled			Nov 26, 2024	Nov 27, 2024	Nov 25, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	0.30	< 0.05	0.08
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.05	0.69	0.04	0.25
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	[N09]0.14	2.0	0.14	0.35
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.01	[N09]0.48	0.02	[N09]0.23
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.04	[N09]1.2	[N09]0.04	[N09]0.32
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	0.36	< 0.01	0.14
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	0.38	< 0.01	0.08
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	0.17	< 0.01	0.04
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	0.03	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	50	71	45	83
13C5-PFPeA (surr.)	1	%	72	74	84	88
13C5-PFHxA (surr.)	1	%	68	109	111	101
13C4-PFHpA (surr.)	1	%	79	82	85	118
13C8-PFOA (surr.)	1	%	79	100	103	95
13C5-PFNA (surr.)	1	%	85	87	90	67
13C6-PFDA (surr.)	1	%	80	37	76	58
13C2-PFUnDA (surr.)	1	%	95	74	69	93
13C2-PFDoDA (surr.)	1	%	91	73	62	94
13C2-PFTeDA (surr.)	1	%	47	37	61	83
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	0.09	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	136	112	149	136
D3-N-MeFOSA (surr.)	1	%	81	66	93	49
D5-N-EtFOSA (surr.)	1	%	56	50	61	32
D7-N-MeFOSE (surr.)	1	%	68	69	54	64
D9-N-EtFOSE (surr.)	1	%	56	58	47	55
D5-N-EtFOSAA (surr.)	1	%	66	56	55	85
D3-N-MeFOSAA (surr.)	1	%	68	64	64	99
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.06	0.27	[N09]0.04	[N09]0.07
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	0.42	< 0.01	[N09]0.02
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.02	0.09	0.01	0.02
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.06	[N09]0.42	[N09]0.03	[N09]0.08
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.47	[N09]2.8	[N09]0.23	[N09]0.77
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.04	[N09]0.21	[N09]0.11	[N09]0.50
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]1.3	[N09]14	[N09]0.90	[N09]3.7
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	0.09	< 0.01	< 0.01

Client Sample ID			0445S_SW333_241126	0445S_SW336_241127	0445S_SW338_241125	0445S_SW340_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002450	M24-De0002451	M24-De0002452	M24-De0002453
Date Sampled			Nov 26, 2024	Nov 27, 2024	Nov 25, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
13C3-PFBS (surr.)	1	%	72	66	102	94
18O2-PFHxS (surr.)	1	%	90	96	94	92
13C8-PFOS (surr.)	1	%	92	88	96	96
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	1.2	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	1.3	< 0.01	0.07
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	0.13	< 0.01	0.05
13C2-4:2 FTSA (surr.)	1	%	72	80	103	61
13C2-6:2 FTSA (surr.)	1	%	66	63	80	52
13C2-8:2 FTSA (surr.)	1	%	68	138	84	130
13C2-10:2 FTSA (surr.)	1	%	63	46	44	94
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	1.77	16.8	1.13	4.47
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	1.34	15.2	0.94	4.02
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	1.81	18	1.17	4.79
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	2.07	24.24	1.41	5.84
Sum of PFASs (n=30)*	0.1	ug/L	2.19	26.63	1.56	6.77

Client Sample ID			0445S_SW346_241125	0445S_SW349_241125	0445S_SW355_241125	0445N_SW370_241127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002454	M24-De0002455	M24-De0002456	M24-De0002457
Date Sampled			Nov 25, 2024	Nov 25, 2024	Nov 25, 2024	Nov 27, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.07	0.08	0.02	0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	0.09	0.11	0.03	0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.03	[N09]0.03	[N09]0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.05	[N09]0.05	[N09]0.02	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	0.01	0.02	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	95	86	97	69
13C5-PFPeA (surr.)	1	%	103	100	108	88
13C5-PFHxA (surr.)	1	%	102	104	108	84
13C4-PFHpA (surr.)	1	%	113	113	118	94
13C8-PFOA (surr.)	1	%	92	94	96	93
13C5-PFNA (surr.)	1	%	92	96	98	95
13C6-PFDA (surr.)	1	%	78	81	83	101

Client Sample ID			0445S_SW346_241125	0445S_SW349_241125	0445S_SW355_241125	0445N_SW370_241127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002454	M24-De0002455	M24-De0002456	M24-De0002457
Date Sampled			Nov 25, 2024	Nov 25, 2024	Nov 25, 2024	Nov 27, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C2-PFUnDA (surr.)	1	%	68	69	71	87
13C2-PFDoDA (surr.)	1	%	58	59	60	77
13C2-PFTeDA (surr.)	1	%	78	84	62	38
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	73	99	96	118
D3-N-MeFOSA (surr.)	1	%	31	60	27	59
D5-N-EtFOSA (surr.)	1	%	37	64	36	44
D7-N-MeFOSE (surr.)	1	%	42	55	48	66
D9-N-EtFOSE (surr.)	1	%	48	55	53	47
D5-N-EtFOSAA (surr.)	1	%	62	61	66	69
D3-N-MeFOSAA (surr.)	1	%	68	72	69	76
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	[N09]0.04	[N09]0.05	[N09]0.02	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.03	0.04	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.03	[N09]0.04	[N09]0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.21	[N09]0.26	[N09]0.08	[N09]0.05
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.01	[N09]0.02	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]1.1	[N09]1.3	[N09]0.36	[N09]0.11
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	105	110	112	82
18O2-PFHxS (surr.)	1	%	92	96	96	95
13C8-PFOS (surr.)	1	%	75	79	79	111
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	96	102	104	104
13C2-6:2 FTSA (surr.)	1	%	93	98	97	85
13C2-8:2 FTSA (surr.)	1	%	69	76	74	79
13C2-10:2 FTSA (surr.)	1	%	57	55	59	55

Client Sample ID			0445S_SW346_241125	0445S_SW349_241125	0445S_SW355_241125	0445N_SW370_241127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002454	M24-De0002455	M24-De0002456	M24-De0002457
Date Sampled			Nov 25, 2024	Nov 25, 2024	Nov 25, 2024	Nov 27, 2024
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	1.31	1.56	0.44	0.16
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	1.15	1.35	0.38	0.11
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	1.36	1.61	0.46	0.16
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	1.59	1.88	0.54	0.18
Sum of PFASs (n=30)*	0.1	ug/L	1.67	2	0.55	0.18

Client Sample ID			0445N_SW374_241127	0445N_SW375_241127	0445E_SW379_241126	0445E_SW380_241127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002458	M24-De0002459	M24-De0002460	M24-De0002461
Date Sampled			Nov 27, 2024	Nov 27, 2024	Nov 26, 2024	Nov 27, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	0.12	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01	0.06	0.02
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01	0.06	[N09]0.02
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.02	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	101	99	90	124
13C5-PFPeA (surr.)	1	%	108	107	94	137
13C5-PFHxA (surr.)	1	%	122	106	104	112
13C4-PFHpA (surr.)	1	%	125	115	56	117
13C8-PFOA (surr.)	1	%	117	96	64	109
13C5-PFNA (surr.)	1	%	104	98	73	113
13C6-PFDA (surr.)	1	%	98	77	82	100
13C2-PFUnDA (surr.)	1	%	75	72	112	94
13C2-PFDoDA (surr.)	1	%	70	64	123	80
13C2-PFTeDA (surr.)	1	%	62	84	99	46
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	79	120	98	113

Client Sample ID			0445N_SW374_241127	0445N_SW375_241127	0445E_SW379_241126	0445E_SW380_241127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002458	M24-De0002459	M24-De0002460	M24-De0002461
Date Sampled			Nov 27, 2024	Nov 27, 2024	Nov 26, 2024	Nov 27, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D3-N-MeFOSA (surr.)	1	%	47	90	20	36
D5-N-EtFOSA (surr.)	1	%	33	87	18	28
D7-N-MeFOSE (surr.)	1	%	61	103	62	56
D9-N-EtFOSE (surr.)	1	%	56	99	41	43
D5-N-EtFOSAA (surr.)	1	%	79	68	98	71
D3-N-MeFOSAA (surr.)	1	%	81	72	98	77
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	0.14	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	0.02	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.01	< 0.01	0.11	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	[N09]0.05	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	0.01	[N09]0.02	[N09]0.18	[N09]0.02
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	0.05	[N09]0.06	[N09]0.74	[N09]0.07
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	0.02	< 0.01
13C3-PFBS (surr.)	1	%	97	109	59	97
18O2-PFHxS (surr.)	1	%	90	97	72	110
13C8-PFOS (surr.)	1	%	95	81	87	112
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	145	106	49	81
13C2-6:2 FTSA (surr.)	1	%	129	101	56	96
13C2-8:2 FTSA (surr.)	1	%	97	75	100	88
13C2-10:2 FTSA (surr.)	1	%	71	60	109	62
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.06	0.08	0.92	0.09
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.05	0.06	0.76	0.07
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.06	0.08	0.94	0.09
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.06	0.08	1.32	0.13
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	1.52	0.13

Client Sample ID			0445E_SW382_241127	0445E_SW387_241127	0445E_SW388_241127	0445_SW390_241127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002462	M24-De0002463	M24-De0002464	M24-De0002465
Date Sampled			Nov 27, 2024	Nov 27, 2024	Nov 27, 2024	Nov 27, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	103	128	107	120
13C5-PFPeA (surr.)	1	%	117	143	126	142
13C5-PFHxA (surr.)	1	%	103	118	108	111
13C4-PFHpA (surr.)	1	%	111	118	109	111
13C8-PFOA (surr.)	1	%	106	112	103	105
13C5-PFNA (surr.)	1	%	103	118	107	109
13C6-PFDA (surr.)	1	%	104	108	97	102
13C2-PFUnDA (surr.)	1	%	95	103	88	91
13C2-PFDoDA (surr.)	1	%	92	83	77	72
13C2-PFTeDA (surr.)	1	%	75	45	43	43
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	130	137	137	143
D3-N-MeFOSA (surr.)	1	%	50	23	46	74
D5-N-EtFOSA (surr.)	1	%	41	19	26	59
D7-N-MeFOSE (surr.)	1	%	69	49	59	51
D9-N-EtFOSE (surr.)	1	%	53	41	49	49
D5-N-EtFOSAA (surr.)	1	%	66	83	70	68
D3-N-MeFOSAA (surr.)	1	%	74	83	68	79
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	[N09]0.02	[N09]0.03	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			0445E_SW382_241127	0445E_SW387_241127	0445E_SW388_241127	0445_SW390_241127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002462	M24-De0002463	M24-De0002464	M24-De0002465
Date Sampled			Nov 27, 2024	Nov 27, 2024	Nov 27, 2024	Nov 27, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
13C3-PFBS (surr.)	1	%	89	101	92	95
18O2-PFHxS (surr.)	1	%	107	110	105	103
13C8-PFOS (surr.)	1	%	115	119	114	111
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	111	87	84	86
13C2-6:2 FTSA (surr.)	1	%	89	98	83	93
13C2-8:2 FTSA (surr.)	1	%	76	86	77	76
13C2-10:2 FTSA (surr.)	1	%	65	61	55	55
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	0.02	0.04	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	0.02	0.03	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	0.02	0.04	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			0445_SW393_241127	0445_SW395_241127	0445_SW397_241127	0445_SW398_241127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002466	M24-De0002467	M24-De0002468	M24-De0002469
Date Sampled			Nov 27, 2024	Nov 27, 2024	Nov 27, 2024	Nov 27, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	0.13	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	0.09	0.20	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.92	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.14	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.32	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	71	108	54	89
13C5-PFPeA (surr.)	1	%	94	139	53	87
13C5-PFHxA (surr.)	1	%	90	123	52	89
13C4-PFHpA (surr.)	1	%	98	132	80	101
13C8-PFOA (surr.)	1	%	97	100	53	80
13C5-PFNA (surr.)	1	%	96	102	106	109
13C6-PFDA (surr.)	1	%	85	93	63	72

Client Sample ID			0445_SW393_241127	0445_SW395_241127	0445_SW397_241127	0445_SW398_241127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002466	M24-De0002467	M24-De0002468	M24-De0002469
Date Sampled			Nov 27, 2024	Nov 27, 2024	Nov 27, 2024	Nov 27, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C2-PFUnDA (surr.)	1	%	72	59	57	58
13C2-PFDoDA (surr.)	1	%	64	35	66	49
13C2-PFTeDA (surr.)	1	%	45	33	100	20
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	135	102	92	89
D3-N-MeFOSA (surr.)	1	%	67	16	102	52
D5-N-EtFOSA (surr.)	1	%	51	22	94	48
D7-N-MeFOSE (surr.)	1	%	42	18	71	39
D9-N-EtFOSE (surr.)	1	%	45	18	62	36
D5-N-EtFOSAA (surr.)	1	%	56	63	70	65
D3-N-MeFOSAA (surr.)	1	%	63	69	80	68
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	0.54	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	0.22	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	0.76	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	[N09]0.03	[N09]3.5	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	0.22	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	[N09]0.04	[N09]3.3	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	81	124	62	105
18O2-PFHxS (surr.)	1	%	98	96	69	82
13C8-PFOS (surr.)	1	%	97	92	60	86
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	81	106	65	86
13C2-6:2 FTSA (surr.)	1	%	71	94	73	114
13C2-8:2 FTSA (surr.)	1	%	66	75	76	111
13C2-10:2 FTSA (surr.)	1	%	41	36	65	61

Client Sample ID			0445_SW393_241127	0445_SW395_241127	0445_SW397_241127	0445_SW398_241127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002466	M24-De0002467	M24-De0002468	M24-De0002469
Date Sampled			Nov 27, 2024	Nov 27, 2024	Nov 27, 2024	Nov 27, 2024
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	0.07	6.8	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	0.04	3.62	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	0.07	7.12	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	0.16	9.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	0.16	10.25	< 0.1

Client Sample ID			0445_SW400_241127	0445_SW401_241127	0445_SW403_241126	0445_SW404_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002470	M24-De0002471	M24-De0002472	M24-De0002473
Date Sampled			Nov 27, 2024	Nov 27, 2024	Nov 26, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	0.02	0.02	0.02	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	0.01	0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	50	66	40	114
13C5-PFPeA (surr.)	1	%	56	40	64	126
13C5-PFHxA (surr.)	1	%	72	54	88	129
13C4-PFHpA (surr.)	1	%	98	88	102	143
13C8-PFOA (surr.)	1	%	87	99	101	139
13C5-PFNA (surr.)	1	%	112	110	111	140
13C6-PFDA (surr.)	1	%	83	94	83	90
13C2-PFUnDA (surr.)	1	%	76	90	55	58
13C2-PFDoDA (surr.)	1	%	79	121	46	50
13C2-PFTeDA (surr.)	1	%	65	152	83	27
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	109	130	91	107

Client Sample ID			0445_SW400_241127	0445_SW401_241127	0445_SW403_241126	0445_SW404_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002470	M24-De0002471	M24-De0002472	M24-De0002473
Date Sampled			Nov 27, 2024	Nov 27, 2024	Nov 26, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D3-N-MeFOSA (surr.)	1	%	31	122	64	59
D5-N-EtFOSA (surr.)	1	%	29	96	64	53
D7-N-MeFOSE (surr.)	1	%	29	120	36	49
D9-N-EtFOSE (surr.)	1	%	31	96	43	46
D5-N-EtFOSAA (surr.)	1	%	66	142	58	64
D3-N-MeFOSAA (surr.)	1	%	68	144	80	88
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.02	0.02	0.02	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.02	[N09]0.02	[N09]0.03	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.12	[N09]0.16	[N09]0.17	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.15	[N09]0.20	[N09]0.18	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	102	60	92	116
18O2-PFHxS (surr.)	1	%	93	86	89	109
13C8-PFOS (surr.)	1	%	100	81	84	90
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	80	76	85	98
13C2-6:2 FTSA (surr.)	1	%	106	77	81	108
13C2-8:2 FTSA (surr.)	1	%	121	106	97	87
13C2-10:2 FTSA (surr.)	1	%	86	184	58	47
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.27	0.36	0.35	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.15	0.21	0.19	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.27	0.37	0.36	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.32	0.41	0.4	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	0.34	0.43	0.43	< 0.1

Client Sample ID			0445_SW405_241126	0445_SW409_241126	0445_SW412_241126	0445_SW416_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002474	M24-De0002475	M24-De0002476	M24-De0002477
Date Sampled			Nov 26, 2024	Nov 26, 2024	Nov 26, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01	0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	52	94	68	117
13C5-PFPeA (surr.)	1	%	85	111	91	121
13C5-PFHxA (surr.)	1	%	107	124	103	105
13C4-PFHpA (surr.)	1	%	132	148	122	106
13C8-PFOA (surr.)	1	%	128	143	117	91
13C5-PFNA (surr.)	1	%	128	149	122	89
13C6-PFDA (surr.)	1	%	86	100	83	85
13C2-PFUnDA (surr.)	1	%	66	76	62	76
13C2-PFDoDA (surr.)	1	%	72	82	72	67
13C2-PFTeDA (surr.)	1	%	99	61	98	79
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	140	119	87	81
D3-N-MeFOSA (surr.)	1	%	42	98	79	15
D5-N-EtFOSA (surr.)	1	%	28	86	78	13
D7-N-MeFOSE (surr.)	1	%	54	68	51	45
D9-N-EtFOSE (surr.)	1	%	52	62	52	35
D5-N-EtFOSAA (surr.)	1	%	67	96	87	86
D3-N-MeFOSAA (surr.)	1	%	78	101	94	88
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.08	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.12	[N09]0.02	[N09]0.04	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			0445_SW405_241126	0445_SW409_241126	0445_SW412_241126	0445_SW416_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002474	M24-De0002475	M24-De0002476	M24-De0002477
Date Sampled			Nov 26, 2024	Nov 26, 2024	Nov 26, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
13C3-PFBS (surr.)	1	%	107	117	97	98
18O2-PFHxS (surr.)	1	%	106	115	94	81
13C8-PFOS (surr.)	1	%	86	97	76	89
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	106	106	92	109
13C2-6:2 FTSA (surr.)	1	%	93	111	93	104
13C2-8:2 FTSA (surr.)	1	%	78	98	95	94
13C2-10:2 FTSA (surr.)	1	%	56	64	73	73
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.2	0.02	0.04	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.12	0.02	0.04	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.2	0.02	0.04	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.2	< 0.05	0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	0.21	< 0.1	< 0.1	< 0.1

Client Sample ID			0445_SW424_241126	0445_SW427_241125	0445_SW430_241125	0445_SW431_241125
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002478	M24-De0002479	M24-De0002480	M24-De0002481
Date Sampled			Nov 26, 2024	Nov 25, 2024	Nov 25, 2024	Nov 25, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.09	0.01	0.01	0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	0.07	0.01	0.01	0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.03	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	72	59	54	80
13C5-PFPeA (surr.)	1	%	79	69	72	90
13C5-PFHxA (surr.)	1	%	77	86	88	111
13C4-PFHpA (surr.)	1	%	81	100	100	121
13C8-PFOA (surr.)	1	%	65	81	80	121
13C5-PFNA (surr.)	1	%	62	105	103	132
13C6-PFDA (surr.)	1	%	50	69	67	102

Client Sample ID			0445_SW424_241126	0445_SW427_241125	0445_SW430_241125	0445_SW431_241125
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002478	M24-De0002479	M24-De0002480	M24-De0002481
Date Sampled			Nov 26, 2024	Nov 25, 2024	Nov 25, 2024	Nov 25, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C2-PFUnDA (surr.)	1	%	44	54	52	73
13C2-PFDoDA (surr.)	1	%	38	51	46	73
13C2-PFTeDA (surr.)	1	%	53	36	28	62
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	76	124	129	104
D3-N-MeFOSA (surr.)	1	%	41	78	86	70
D5-N-EtFOSA (surr.)	1	%	39	74	79	55
D7-N-MeFOSE (surr.)	1	%	53	41	39	74
D9-N-EtFOSE (surr.)	1	%	53	38	42	59
D5-N-EtFOSAA (surr.)	1	%	40	39	38	107
D3-N-MeFOSAA (surr.)	1	%	45	49	47	127
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	[N09]0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	[N09]0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.02
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.02	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.23	[N09]0.03	[N09]0.02	[N09]0.02
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]1.7	[N09]0.11	[N09]0.15	[N09]0.06
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	75	108	108	109
18O2-PFHxS (surr.)	1	%	66	90	88	107
13C8-PFOS (surr.)	1	%	54	89	87	97
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	67	85	84	111
13C2-6:2 FTSA (surr.)	1	%	65	104	105	99
13C2-8:2 FTSA (surr.)	1	%	45	73	69	139
13C2-10:2 FTSA (surr.)	1	%	35	43	38	111

Client Sample ID			0445_SW424_241126	0445_SW427_241125	0445_SW430_241125	0445_SW431_241125
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002478	M24-De0002479	M24-De0002480	M24-De0002481
Date Sampled			Nov 26, 2024	Nov 25, 2024	Nov 25, 2024	Nov 25, 2024
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	1.93	0.14	0.17	0.08
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	1.73	0.11	0.15	0.06
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	1.96	0.14	0.17	0.08
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	2.14	0.16	0.19	0.1
Sum of PFASs (n=30)*	0.1	ug/L	2.18	0.16	0.19	0.12

Client Sample ID			0445_SW432_241125	0445_SW434_241125	0445S_SW448_241126	0445_SW462_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002482	M24-De0002483	M24-De0002484	M24-De0002485
Date Sampled			Nov 25, 2024	Nov 25, 2024	Nov 26, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	0.09	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.07	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	0.02	< 0.01	[N09]0.12	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.02	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.03	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	84	115	51	84
13C5-PFPeA (surr.)	1	%	116	118	87	131
13C5-PFHxA (surr.)	1	%	108	100	93	119
13C4-PFHpA (surr.)	1	%	120	117	114	133
13C8-PFOA (surr.)	1	%	91	85	85	97
13C5-PFNA (surr.)	1	%	95	87	91	97
13C6-PFDA (surr.)	1	%	87	80	74	87
13C2-PFUnDA (surr.)	1	%	57	53	53	60
13C2-PFDoDA (surr.)	1	%	35	33	48	36
13C2-PFTeDA (surr.)	1	%	28	29	38	28
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	84	83	65	106

Client Sample ID			0445_SW432_241125	0445_SW434_241125	0445S_SW448_241126	0445_SW462_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002482	M24-De0002483	M24-De0002484	M24-De0002485
Date Sampled			Nov 25, 2024	Nov 25, 2024	Nov 26, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D3-N-MeFOSA (surr.)	1	%	29	43	46	64
D5-N-EtFOSA (surr.)	1	%	33	49	46	71
D7-N-MeFOSE (surr.)	1	%	23	21	39	43
D9-N-EtFOSE (surr.)	1	%	21	26	30	32
D5-N-EtFOSAA (surr.)	1	%	63	54	68	63
D3-N-MeFOSAA (surr.)	1	%	62	58	65	68
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	0.07	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	0.08	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	[N09]0.03	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.02	< 0.01	[N09]0.61	[N09]0.02
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	0.02	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.10	[N09]0.01	[N09]1.0	[N09]0.06
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	105	100	114	119
18O2-PFHxS (surr.)	1	%	87	81	86	89
13C8-PFOS (surr.)	1	%	87	77	75	87
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	92	89	6.0	106
13C2-6:2 FTSA (surr.)	1	%	92	84	83	93
13C2-8:2 FTSA (surr.)	1	%	74	68	71	73
13C2-10:2 FTSA (surr.)	1	%	35	34	40	34
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.12	0.01	1.61	0.08
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.1	0.01	1.03	0.06
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.12	0.01	1.64	0.08
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.14	< 0.05	2.01	0.08
Sum of PFASs (n=30)*	0.1	ug/L	0.14	< 0.1	2.14	< 0.1

Client Sample ID			0445_SW463_241126	0445_SW470_241127	0445_SW471_241127	0445_SW487_241127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002486	M24-De0002487	M24-De0002488	M24-De0002489
Date Sampled			Nov 26, 2024	Nov 27, 2024	Nov 27, 2024	Nov 27, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	0.12	0.15
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	[N09]0.05	< 0.01	0.19	0.22
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	0.01	[N09]0.83	1.1
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.11	[N09]0.17
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.21	[N09]0.37
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	37	50	58	105
13C5-PFPeA (surr.)	1	%	60	87	87	116
13C5-PFHxA (surr.)	1	%	63	90	84	99
13C4-PFHpA (surr.)	1	%	82	102	89	111
13C8-PFOA (surr.)	1	%	74	81	99	80
13C5-PFNA (surr.)	1	%	74	83	99	86
13C6-PFDA (surr.)	1	%	64	69	95	64
13C2-PFUnDA (surr.)	1	%	52	51	94	61
13C2-PFDoDA (surr.)	1	%	50	35	79	52
13C2-PFTeDA (surr.)	1	%	69	35	78	85
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	57	73	112	92
D3-N-MeFOSA (surr.)	1	%	81	31	75	46
D5-N-EtFOSA (surr.)	1	%	89	33	73	53
D7-N-MeFOSE (surr.)	1	%	49	22	78	44
D9-N-EtFOSE (surr.)	1	%	41	23	79	49
D5-N-EtFOSAA (surr.)	1	%	54	57	63	57
D3-N-MeFOSAA (surr.)	1	%	47	55	77	65
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	0.02	[N09]0.66	[N09]0.60
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	0.01	0.26	0.26
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	[N09]0.02	[N09]0.66	[N09]0.76
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.02	[N09]0.19	[N09]3.2	[N09]4.5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	[N09]0.13	[N09]0.34
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.30	[N09]0.23	[N09]2.0	[N09]7.7
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			0445_SW463_241126	0445_SW470_241127	0445_SW471_241127	0445_SW487_241127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002486	M24-De0002487	M24-De0002488	M24-De0002489
Date Sampled			Nov 26, 2024	Nov 27, 2024	Nov 27, 2024	Nov 27, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
13C3-PFBS (surr.)	1	%	85	99	92	103
18O2-PFHxS (surr.)	1	%	71	78	83	68
13C8-PFOS (surr.)	1	%	64	71	70	75
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	63	78	95	93
13C2-6:2 FTSA (surr.)	1	%	64	79	87	85
13C2-8:2 FTSA (surr.)	1	%	61	64	111	62
13C2-10:2 FTSA (surr.)	1	%	48	34	95	50
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.32	0.42	5.2	12.2
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.3	0.23	2.21	8.07
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.32	0.42	5.41	12.57
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.37	0.45	7.32	14.81
Sum of PFASs (n=30)*	0.1	ug/L	0.37	0.48	8.37	16.17

Client Sample ID			0445_QC301_241125	0445_QC302_241125	0445_QC301_241126	0445_QC302_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002490	M24-De0002491	M24-De0002492	M24-De0002493
Date Sampled			Nov 25, 2024	Nov 25, 2024	Nov 26, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	107	107	104	108
13C5-PFPeA (surr.)	1	%	110	112	108	111
13C5-PFHxA (surr.)	1	%	92	92	92	93
13C4-PFHpA (surr.)	1	%	96	99	96	98
13C8-PFOA (surr.)	1	%	77	81	77	80
13C5-PFNA (surr.)	1	%	78	81	77	85
13C6-PFDA (surr.)	1	%	70	77	66	77

Client Sample ID			0445_QC301_241125	0445_QC302_241125	0445_QC301_241126	0445_QC302_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002490	M24-De0002491	M24-De0002492	M24-De0002493
Date Sampled			Nov 25, 2024	Nov 25, 2024	Nov 26, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C2-PFUnDA (surr.)	1	%	73	76	69	78
13C2-PFDoDA (surr.)	1	%	72	72	69	78
13C2-PFTeDA (surr.)	1	%	95	96	94	107
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	98	100	84	83
D3-N-MeFOSA (surr.)	1	%	46	62	47	38
D5-N-EtFOSA (surr.)	1	%	48	74	52	47
D7-N-MeFOSE (surr.)	1	%	81	84	63	54
D9-N-EtFOSE (surr.)	1	%	76	80	64	57
D5-N-EtFOSAA (surr.)	1	%	68	68	66	78
D3-N-MeFOSAA (surr.)	1	%	68	74	63	78
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	95	94	92	96
18O2-PFHxS (surr.)	1	%	78	78	78	80
13C8-PFOS (surr.)	1	%	68	70	65	73
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	75	75	75	75
13C2-6:2 FTSA (surr.)	1	%	72	77	75	76
13C2-8:2 FTSA (surr.)	1	%	56	59	54	63
13C2-10:2 FTSA (surr.)	1	%	70	70	67	74

Client Sample ID			0445_QC301_241125	0445_QC302_241125	0445_QC301_241126	0445_QC302_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002490	M24-De0002491	M24-De0002492	M24-De0002493
Date Sampled			Nov 25, 2024	Nov 25, 2024	Nov 26, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			0445_QC301_241127	0445_QC302_241127	0445_QC301_241128	0445_QC302_241128
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002494	M24-De0002495	M24-De0002496	M24-De0002497
Date Sampled			Nov 27, 2024	Nov 27, 2024	Nov 28, 2024	Nov 28, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	110	107	114	99
13C5-PFPeA (surr.)	1	%	113	108	113	103
13C5-PFHxA (surr.)	1	%	93	89	108	85
13C4-PFHpA (surr.)	1	%	100	95	119	93
13C8-PFOA (surr.)	1	%	79	74	97	75
13C5-PFNA (surr.)	1	%	80	74	126	77
13C6-PFDA (surr.)	1	%	72	64	88	72
13C2-PFUnDA (surr.)	1	%	75	67	83	69
13C2-PFDoDA (surr.)	1	%	71	65	94	64
13C2-PFTeDA (surr.)	1	%	101	90	45	76
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	85	85	86	65

Client Sample ID			0445_QC301_241127	0445_QC302_241127	0445_QC301_241128	0445_QC302_241128
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002494	M24-De0002495	M24-De0002496	M24-De0002497
Date Sampled			Nov 27, 2024	Nov 27, 2024	Nov 28, 2024	Nov 28, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D3-N-MeFOSA (surr.)	1	%	38	38	60	27
D5-N-EtFOSA (surr.)	1	%	48	45	60	34
D7-N-MeFOSE (surr.)	1	%	62	69	52	46
D9-N-EtFOSE (surr.)	1	%	66	70	62	51
D5-N-EtFOSAA (surr.)	1	%	71	62	80	67
D3-N-MeFOSAA (surr.)	1	%	74	68	76	67
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	97	92	126	87
18O2-PFHxS (surr.)	1	%	80	76	97	76
13C8-PFOS (surr.)	1	%	70	65	100	69
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	73	69	100	67
13C2-6:2 FTSA (surr.)	1	%	74	71	128	70
13C2-8:2 FTSA (surr.)	1	%	58	51	121	54
13C2-10:2 FTSA (surr.)	1	%	66	60	95	62
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			0445_QC301_241129	0445_QC302_241129	0445_QC401_241125	0445_QC401_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002498	M24-De0002499	M24-De0002500	M24-De0002501
Date Sampled			Nov 29, 2024	Nov 29, 2024	Nov 25, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	90	63	105	91
13C5-PFPeA (surr.)	1	%	74	63	98	85
13C5-PFHxA (surr.)	1	%	73	59	87	75
13C4-PFHpA (surr.)	1	%	97	60	93	73
13C8-PFOA (surr.)	1	%	76	54	81	66
13C5-PFNA (surr.)	1	%	83	48	75	62
13C6-PFDA (surr.)	1	%	84	41	72	66
13C2-PFUnDA (surr.)	1	%	76	32	66	58
13C2-PFDoDA (surr.)	1	%	76	32	71	65
13C2-PFTeDA (surr.)	1	%	117	52	40	49
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	88	42	69	63
D3-N-MeFOSA (surr.)	1	%	87	80	70	30
D5-N-EtFOSA (surr.)	1	%	124	84	67	30
D7-N-MeFOSE (surr.)	1	%	80	55	106	71
D9-N-EtFOSE (surr.)	1	%	74	55	93	60
D5-N-EtFOSAA (surr.)	1	%	81	34	81	70
D3-N-MeFOSAA (surr.)	1	%	75	29	68	58
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			0445_QC301_241129	0445_QC302_241129	0445_QC401_241125	0445_QC401_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002498	M24-De0002499	M24-De0002500	M24-De0002501
Date Sampled			Nov 29, 2024	Nov 29, 2024	Nov 25, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
13C3-PFBS (surr.)	1	%	73	50	77	62
18O2-PFHxS (surr.)	1	%	70	53	80	64
13C8-PFOS (surr.)	1	%	73	52	73	61
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	69	44	66	53
13C2-6:2 FTSA (surr.)	1	%	75	44	67	55
13C2-8:2 FTSA (surr.)	1	%	72	35	65	56
13C2-10:2 FTSA (surr.)	1	%	77	27	59	55
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			0445_QC401_241127	0445_QC401_241128	0445_QC401_241129	0445_QC501_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002502	M24-De0002503	M24-De0002504	M24-De0002505
Date Sampled			Nov 27, 2024	Nov 28, 2024	Nov 29, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	125	114	67	126
13C5-PFPeA (surr.)	1	%	112	108	67	131
13C5-PFHxA (surr.)	1	%	86	79	52	112
13C4-PFHpA (surr.)	1	%	88	84	60	119
13C8-PFOA (surr.)	1	%	93	73	59	104
13C5-PFNA (surr.)	1	%	91	68	51	105
13C6-PFDA (surr.)	1	%	109	68	51	113

Client Sample ID			0445_QC401_241127	0445_QC401_241128	0445_QC401_241129	0445_QC501_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002502	M24-De0002503	M24-De0002504	M24-De0002505
Date Sampled			Nov 27, 2024	Nov 28, 2024	Nov 29, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C2-PFUnDA (surr.)	1	%	97	110	82	108
13C2-PFDoDA (surr.)	1	%	101	124	91	100
13C2-PFTeDA (surr.)	1	%	182	58	71	75
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	113	74	53	84
D3-N-MeFOSA (surr.)	1	%	138	86	125	21
D5-N-EtFOSA (surr.)	1	%	155	69	116	18
D7-N-MeFOSE (surr.)	1	%	103	102	86	56
D9-N-EtFOSE (surr.)	1	%	106	106	81	51
D5-N-EtFOSAA (surr.)	1	%	75	66	46	118
D3-N-MeFOSAA (surr.)	1	%	83	68	47	131
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	94	83	63	105
18O2-PFHxS (surr.)	1	%	99	68	54	92
13C8-PFOS (surr.)	1	%	97	69	50	113
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	61	69	54	115
13C2-6:2 FTSA (surr.)	1	%	68	68	52	118
13C2-8:2 FTSA (surr.)	1	%	154	79	61	125
13C2-10:2 FTSA (surr.)	1	%	110	90	72	112

Client Sample ID			0445_QC401_241127	0445_QC401_241128	0445_QC401_241129	0445_QC501_241126
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002502	M24-De0002503	M24-De0002504	M24-De0002505
Date Sampled			Nov 27, 2024	Nov 28, 2024	Nov 29, 2024	Nov 26, 2024
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			0445_QC102_241129	0445_QC101_241128	0445_QC102_241128	0445_QC101_241129
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002506	M24-De0002507	M24-De0002508	M24-De0002509
Date Sampled			Nov 29, 2024	Nov 28, 2024	Nov 28, 2024	Nov 29, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.04	0.06	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	0.31	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	[N09]0.03	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	[N09]0.09	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	119	122	108	126
13C5-PFPeA (surr.)	1	%	118	124	115	117
13C5-PFHxA (surr.)	1	%	104	124	96	84
13C4-PFHpA (surr.)	1	%	116	125	104	87
13C8-PFOA (surr.)	1	%	101	112	84	75
13C5-PFNA (surr.)	1	%	100	110	86	71
13C6-PFDA (surr.)	1	%	115	116	76	64
13C2-PFUnDA (surr.)	1	%	120	106	72	90
13C2-PFDoDA (surr.)	1	%	116	110	68	89
13C2-PFTeDA (surr.)	1	%	114	127	98	47
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	89	60	95	64

Client Sample ID			0445_QC102_241129	0445_QC101_241128	0445_QC102_241128	0445_QC101_241129
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002506	M24-De0002507	M24-De0002508	M24-De0002509
Date Sampled			Nov 29, 2024	Nov 28, 2024	Nov 28, 2024	Nov 29, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D3-N-MeFOSA (surr.)	1	%	28	17	59	65
D5-N-EtFOSA (surr.)	1	%	27	14	68	41
D7-N-MeFOSE (surr.)	1	%	61	28	65	99
D9-N-EtFOSE (surr.)	1	%	62	33	66	83
D5-N-EtFOSAA (surr.)	1	%	112	98	63	59
D3-N-MeFOSAA (surr.)	1	%	124	103	65	57
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	0.13	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	0.06	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	[N09]0.18	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	[N09]2.0	[N09]0.03	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	[N09]0.09	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.05	[N09]2.8	[N09]0.02	[N09]0.07
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	101	99	99	91
18O2-PFHxS (surr.)	1	%	85	54	85	94
13C8-PFOS (surr.)	1	%	112	58	79	90
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	95	112	72	75
13C2-6:2 FTSA (surr.)	1	%	104	121	74	67
13C2-8:2 FTSA (surr.)	1	%	111	106	56	74
13C2-10:2 FTSA (surr.)	1	%	115	109	59	69
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.05	4.8	0.05	0.07
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.05	2.89	0.02	0.07
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.05	4.89	0.05	0.07
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.09	5.42	0.05	0.07
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	5.75	< 0.1	< 0.1

Client Sample ID			0445_QC101_241126	0445_QC102_241126	0445_QC103_241126	0445_QC102_241127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002510	M24-De0002511	M24-De0002512	M24-De0002513
Date Sampled			Nov 26, 2024	Nov 26, 2024	Nov 26, 2024	Nov 27, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	0.11	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.18	0.09	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	[N09]0.11	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.02	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.03	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	0.02	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	50	112	122	108
13C5-PFPeA (surr.)	1	%	52	119	124	117
13C5-PFHxA (surr.)	1	%	90	110	108	114
13C4-PFHpA (surr.)	1	%	124	116	110	120
13C8-PFOA (surr.)	1	%	105	100	94	107
13C5-PFNA (surr.)	1	%	91	93	88	101
13C6-PFDA (surr.)	1	%	72	88	79	97
13C2-PFUnDA (surr.)	1	%	46	76	62	79
13C2-PFDoDA (surr.)	1	%	46	67	53	68
13C2-PFTeDA (surr.)	1	%	22	68	54	72
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	58	63	79	71
D3-N-MeFOSA (surr.)	1	%	32	11	22	14
D5-N-EtFOSA (surr.)	1	%	32	11	15	14
D7-N-MeFOSE (surr.)	1	%	64	28	52	35
D9-N-EtFOSE (surr.)	1	%	41	25	45	34
D5-N-EtFOSAA (surr.)	1	%	59	84	66	87
D3-N-MeFOSAA (surr.)	1	%	53	85	78	99
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.06	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.08	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.04	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.67	< 0.01	< 0.01	[N09]0.04
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.03	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]1.3	[N09]0.03	< 0.01	[N09]0.06
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			0445_QC101_241126	0445_QC102_241126	0445_QC103_241126	0445_QC102_241127
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0002510	M24-De0002511	M24-De0002512	M24-De0002513
Date Sampled			Nov 26, 2024	Nov 26, 2024	Nov 26, 2024	Nov 27, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
13C3-PFBS (surr.)	1	%	119	101	101	107
18O2-PFHxS (surr.)	1	%	107	89	84	93
13C8-PFOS (surr.)	1	%	87	97	84	99
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	101	119	112	128
13C2-6:2 FTSA (surr.)	1	%	126	117	107	124
13C2-8:2 FTSA (surr.)	1	%	63	98	87	104
13C2-10:2 FTSA (surr.)	1	%	38	71	57	73
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	1.97	0.03	< 0.01	0.1
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	1.33	0.03	< 0.01	0.06
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	2	0.03	< 0.01	0.1
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	2.48	0.12	< 0.05	0.1
Sum of PFASs (n=30)*	0.1	ug/L	2.65	0.12	< 0.1	0.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Melbourne	Dec 12, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Dec 12, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Dec 12, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Dec 12, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Dec 02, 2024	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Per- and Polyfluoroalkyl Substances (PFASs) - Trace			
PFASs Summations	Melbourne	Dec 02, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level			
Perfluoroalkyl sulfonamido substances- Trace	Melbourne	Dec 03, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level			
Perfluoroalkyl carboxylic acids (PFCAs) - Trace	Melbourne	Dec 03, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level			
Perfluoroalkyl sulfonic acids (PFSAs)- Trace	Melbourne	Dec 03, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- Trace	Melbourne	Dec 03, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level			

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Company Name: JBS & G Australia (VIC) P/L
Address: PO Box 3166
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SA 5067

Project Name: Bandiana OMP
Project ID: VIC_0445_PFASOMP_24A

Order No.:
Report #: 1166588
Phone: 03 9642 0599
Fax:

Received: Dec 2, 2024 2:21 PM
Due: Dec 9, 2024
Priority: 5 Day

[redacted]

Sample Detail	CANCELLED*	HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace
Melbourne Laboratory - NATA # 1261 Site # 1254	X	X	X	X
External Laboratory				

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	0445E_MW018_241128	Nov 28, 2024		Water	M24-De0002413			X	
2	0445E_MW034_241128	Nov 28, 2024		Water	M24-De0002414			X	
3	0445E_MW046D_241128	Nov 28, 2024		Water	M24-De0002415			X	
4	0445E_MW046I_241128	Nov 28, 2024		Water	M24-De0002416			X	
5	0445S_MW051_241129	Nov 29, 2024		Water	M24-De0002417			X	
6	0445S_MW304_241128	Nov 28, 2024		Water	M24-De0002418			X	
7	0445S_MW307_241128	Nov 28, 2024		Water	M24-De0002419			X	
8	0445S_MW311_241128	Nov 28, 2024		Water	M24-De0002420			X	
9	0445S_MW31	Nov 28, 2024		Water	M24-De0002421			X	

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Project ID: VIC_0445_PFASOMP_24A

Order No.:
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Phone: 03 9642 0599
Fax:

Received: Dec 2, 2024 2:21 PM
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[redacted]

Sample Detail						CANCELLED*	HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
	2_241128								
10	0445S_MW315_241128	Nov 28, 2024		Water	M24-De0002422			X	
11	0445S_MW317_241126	Nov 26, 2024		Water	M24-De0002423			X	
12	0445S_MW319_241129	Nov 29, 2024		Water	M24-De0002424			X	
13	0445S_MW321_241128	Nov 28, 2024		Water	M24-De0002425			X	
14	0445S_MW323_241129	Nov 29, 2024		Water	M24-De0002426			X	
15	0445S_MW329_241129	Nov 29, 2024		Water	M24-De0002427			X	
16	0445N_MW342_241129	Nov 29, 2024		Water	M24-De0002428			X	
17	0445E_MW351_241128	Nov 28, 2024		Water	M24-De0002429				X
18	0445E_MW352_241128	Nov 28, 2024		Water	M24-De0002430				X
19	0445E_MW35	Nov 28, 2024		Water	M24-De0002431			X	

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[redacted]

Sample Detail						CANCELLED*	HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
19	0445E_MW354_241128	Nov 28, 2024		Water	M24-De0002431				
20	0445_MW357_241129	Nov 29, 2024		Water	M24-De0002432			X	
21	0445_MW360_241128	Nov 28, 2024		Water	M24-De0002433			X	
22	0445_MW361_241128	Nov 28, 2024		Water	M24-De0002434			X	
23	0445S_MW416_241129	Nov 29, 2024		Water	M24-De0002435			X	
24	0445_OTH019_241125	Nov 25, 2024		Water	M24-De0002436				X
25	0445S_SW302_241127	Nov 27, 2024		Water	M24-De0002437			X	
26	0445S_SW307_241127	Nov 27, 2024		Water	M24-De0002438			X	
27	0445S_SW310_241127	Nov 27, 2024		Water	M24-De0002439			X	
28	0445S_SW311_241126	Nov 26, 2024		Water	M24-De0002440			X	

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Project Name: Bandiana OMP
Project ID: VIC_0445_PFASOMP_24A

Order No.:
Report #: 1166588
Phone: 03 9642 0599
Fax:

Received: Dec 2, 2024 2:21 PM
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Priority: 5 Day

[redacted]

Sample Detail						CANCELLED*	HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
29	0445S_SW313_241125	Nov 25, 2024		Water	M24-De0002441			X	
30	0445S_SW316_241126	Nov 26, 2024		Water	M24-De0002442			X	
31	0445S_SW321_241126	Nov 26, 2024		Water	M24-De0002443			X	
32	0445S_SW322_241125	Nov 25, 2024		Water	M24-De0002444	X			
33	0445S_SW322_241126	Nov 26, 2024		Water	M24-De0002445			X	
34	0445S_SW323_241126	Nov 26, 2024		Water	M24-De0002446			X	
35	0445S_SW324_241126	Nov 26, 2024		Water	M24-De0002447			X	
36	0445S_SW326_241125	Nov 25, 2024		Water	M24-De0002448			X	
37	0445S_SW332_241124	Nov 25, 2024		Water	M24-De0002449			X	
38	0445S_SW333_241126	Nov 26, 2024		Water	M24-De0002450			X	

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Project ID: VIC_0445_PFASOMP_24A

Order No.:
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Phone: 03 9642 0599
Fax:

Received: Dec 2, 2024 2:21 PM
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Sample Detail						CANCELLED*	HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
39	0445S_SW336_241127	Nov 27, 2024		Water	M24-De0002451			X	
40	0445S_SW338_241125	Nov 25, 2024		Water	M24-De0002452			X	
41	0445S_SW340_241126	Nov 26, 2024		Water	M24-De0002453			X	
42	0445S_SW346_241125	Nov 25, 2024		Water	M24-De0002454			X	
43	0445S_SW349_241125	Nov 25, 2024		Water	M24-De0002455			X	
44	0445S_SW355_241125	Nov 25, 2024		Water	M24-De0002456			X	
45	0445N_SW370_241127	Nov 27, 2024		Water	M24-De0002457			X	
46	0445N_SW374_241127	Nov 27, 2024		Water	M24-De0002458			X	
47	0445N_SW375_241127	Nov 27, 2024		Water	M24-De0002459			X	
48	0445E_SW379_241126	Nov 26, 2024		Water	M24-De0002460			X	

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Received: Dec 2, 2024 2:21 PM
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Sample Detail						CANCELLED*	HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
49	0445E_SW380_241127	Nov 27, 2024		Water	M24-De0002461			X	
50	0445E_SW382_241127	Nov 27, 2024		Water	M24-De0002462			X	
51	0445E_SW387_241127	Nov 27, 2024		Water	M24-De0002463			X	
52	0445E_SW388_241127	Nov 27, 2024		Water	M24-De0002464			X	
53	0445_SW390_241127	Nov 27, 2024		Water	M24-De0002465			X	
54	0445_SW393_241127	Nov 27, 2024		Water	M24-De0002466			X	
55	0445_SW395_241127	Nov 27, 2024		Water	M24-De0002467			X	
56	0445_SW397_241127	Nov 27, 2024		Water	M24-De0002468			X	
57	0445_SW398_241127	Nov 27, 2024		Water	M24-De0002469			X	
58	0445_SW400_241127	Nov 27, 2024		Water	M24-De0002470			X	

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Sample Detail						CANCELLED*	HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
59	0445_SW401_241127	Nov 27, 2024		Water	M24-De0002471			X	
60	0445_SW403_241126	Nov 26, 2024		Water	M24-De0002472			X	
61	0445_SW404_241126	Nov 26, 2024		Water	M24-De0002473			X	
62	0445_SW405_241126	Nov 26, 2024		Water	M24-De0002474			X	
63	0445_SW409_241126	Nov 26, 2024		Water	M24-De0002475			X	
64	0445_SW412_241126	Nov 26, 2024		Water	M24-De0002476			X	
65	0445_SW416_241126	Nov 26, 2024		Water	M24-De0002477			X	
66	0445_SW424_241126	Nov 26, 2024		Water	M24-De0002478			X	
67	0445_SW427_241125	Nov 25, 2024		Water	M24-De0002479			X	
68	0445_SW430_241125	Nov 25, 2024		Water	M24-De0002480			X	

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Company Name: JBS & G Australia (VIC) P/L
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SA 5067

Project Name: Bandiana OMP
Project ID: VIC_0445_PFASOMP_24A

Order No.:
Report #: 1166588
Phone: 03 9642 0599
Fax:

Received: Dec 2, 2024 2:21 PM
Due: Dec 9, 2024

[redacted]

Sample Detail						CANCELLED*	HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
69	0445_SW431_241125	Nov 25, 2024		Water	M24-De0002481			X	
70	0445_SW432_241125	Nov 25, 2024		Water	M24-De0002482			X	
71	0445_SW434_241125	Nov 25, 2024		Water	M24-De0002483			X	
72	0445S_SW448_241126	Nov 26, 2024		Water	M24-De0002484			X	
73	0445_SW462_241126	Nov 26, 2024		Water	M24-De0002485			X	
74	0445_SW463_241126	Nov 26, 2024		Water	M24-De0002486			X	
75	0445_SW470_241127	Nov 27, 2024		Water	M24-De0002487			X	
76	0445_SW471_241127	Nov 27, 2024		Water	M24-De0002488			X	
77	0445_SW487_241127	Nov 27, 2024		Water	M24-De0002489			X	
78	0445_QC301_241125	Nov 25, 2024		Water	M24-De0002490			X	

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Project ID: VIC_0445_PFASOMP_24A

Order No.:
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Fax:

Received: Dec 2, 2024 2:21 PM
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[redacted]

Sample Detail						CANCELLED*	HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
79	0445_QC302_241125	Nov 25, 2024		Water	M24-De0002491			X	
80	0445_QC301_241126	Nov 26, 2024		Water	M24-De0002492			X	
81	0445_QC302_241126	Nov 26, 2024		Water	M24-De0002493			X	
82	0445_QC301_241127	Nov 27, 2024		Water	M24-De0002494			X	
83	0445_QC302_241127	Nov 27, 2024		Water	M24-De0002495			X	
84	0445_QC301_241128	Nov 28, 2024		Water	M24-De0002496			X	
85	0445_QC302_241128	Nov 28, 2024		Water	M24-De0002497			X	
86	0445_QC301_241129	Nov 29, 2024		Water	M24-De0002498			X	
87	0445_QC302_241129	Nov 29, 2024		Water	M24-De0002499			X	
88	0445_QC401_241125	Nov 25, 2024		Water	M24-De0002500			X	

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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Project ID: VIC_0445_PFASOMP_24A

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Sample Detail						CANCELLED*	HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
89	0445_QC401_241126	Nov 26, 2024		Water	M24-De0002501			X	
90	0445_QC401_241127	Nov 27, 2024		Water	M24-De0002502			X	
91	0445_QC401_241128	Nov 28, 2024		Water	M24-De0002503			X	
92	0445_QC401_241129	Nov 29, 2024		Water	M24-De0002504			X	
93	0445_QC501_241126	Nov 26, 2024		Water	M24-De0002505			X	
94	0445_QC102_241129	Nov 29, 2024		Water	M24-De0002506			X	
95	0445_QC101_241128	Nov 28, 2024		Water	M24-De0002507			X	
96	0445_QC102_241128	Nov 28, 2024		Water	M24-De0002508			X	
97	0445_QC101_241129	Nov 29, 2024		Water	M24-De0002509			X	
98	0445_QC101_241126	Nov 26, 2024		Water	M24-De0002510			X	

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[redacted]

Sample Detail						CANCELLED*	HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
99	0445_QC102_241126	Nov 26, 2024		Water	M24-De0002511			X	
100	0445_QC103_241126	Nov 26, 2024		Water	M24-De0002512			X	
101	0445_QC102_241127	Nov 27, 2024		Water	M24-De0002513			X	
102	0445E_MW020_241128	Nov 28, 2024		Water	M24-De0002514		X		
103	0445S_MW056_241129	Nov 29, 2024		Water	M24-De0002515		X		
104	0445S_MW359_241129	Nov 29, 2024		Water	M24-De0002516		X		
105	0445_QC502_241126	Nov 26, 2024		Water	M24-De0002517		X		
106	0445_QC503_241126	Nov 26, 2024		Water	M24-De0002518		X		
107	0445_QC501_241128	Nov 28, 2024		Water	M24-De0002519		X		
108	0445_QC502_241128	Nov 28, 2024		Water	M24-De0002520		X		

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Sample Detail						CANCELLED*	HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
109	0445_QC503_241128	Nov 28, 2024		Water	M24-De0002521		X		
110	0445_QC501_241129	Nov 29, 2024		Water	M24-De0002522		X		
111	0445_QC101_241125	Nov 25, 2024		Water	M24-De0002523		X		
Test Counts						1	10	97	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 (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
PFASs Summations							
Sum (PFHxS + PFOS)*	ug/L	-			0.01	N/A	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	ug/L	-			0.01	N/A	
Sum of WA DWER PFAS (n=10)*	ug/L	-			0.05	N/A	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	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	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances- Trace							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
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	< 0.001			0.001	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							
Perfluoroalkyl sulfonic acids (PFSAs)- 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	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.001			0.001	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.001			0.001	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- 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 carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	94			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	100			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	106			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	90			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	101			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	83			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	104			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoropentanesulfonic acid (PFPeS)	%	102			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	97			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	99			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	94			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	101			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	107			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	117			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	98			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	107			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	93			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	95			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	103			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	102			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	79			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	121			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	90			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	103			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	97			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	114			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	100			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	106			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	104			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	94			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	100			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	105			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	97			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	110			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	112			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	106			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	88			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	100			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	114			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	102			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	108			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	101			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	104			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	110			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	100			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	102			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	94			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	96			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	96			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	101			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	78			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorotetradecanoic acid (PFTeDA)	%	126			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	92			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	104			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	101			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	115			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	98			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	98			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	113			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	90			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	104			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	104			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	102			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	105			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	100			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	101			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	104			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	105			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	112			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	104			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	102			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	91			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	95			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	106			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	88			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	96			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	88			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	86			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	91			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	96			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	61			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	102			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	81			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	106			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	80			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	108			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	85			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	87			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	99			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	86			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	94			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	97			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoropentanesulfonic acid (PFPeS)	%	92			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	91			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	107			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	94			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	68			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	95			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	99			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	93			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	92			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	88			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	94			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	95			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	85			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	93			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	81			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	85			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	94			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	99			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	59			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	124			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	94			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	116			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	94			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	83			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	83			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	83			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	76			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	74			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	93			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	90			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	91			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	96			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	88			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	53			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	85			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)	%	110			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances- Trace							
Perfluorooctane sulfonamide (FOSA)	%	85			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	100			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	89			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	60			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	91			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	85			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	101			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs) - Trace							
Perfluorobutanoic acid (PFBA)	%	95			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	103			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	104			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	91			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	104			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	93			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	93			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	50			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	97			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	108			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	129			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)- Trace							
Perfluorobutanesulfonic acid (PFBS)	%	89			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	74			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	89			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	108			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	94			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	110			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	91			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- Trace							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	100			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	107			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	102			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	88			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	93			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	97			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	105			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	88			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	99			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	85			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	88			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	93			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	94			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	60			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	110			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	84			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	77			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	92			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	97			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	89			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	90			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	95			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	87			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	85			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	93			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	89			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	91			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	101			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	90			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	69			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	92			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	100			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)	%	94			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	88			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	85			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	97			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	83			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	93			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	83			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	83			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	82			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	83			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	61			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	105			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	83			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	93			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	86			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	91			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	90			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	82			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	98			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	81			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	89			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	92			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	100			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	92			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	94			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	88			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	69			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	93			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	93			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	95			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	93			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	91			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	99			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	101			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	89			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	100			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	84			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	93			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	90			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	98			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	54			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	126			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	83			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	95			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	79			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	78			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	80			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	88			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	83			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	83			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	83			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	98			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	96			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	97			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	93			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	90			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	66			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	92			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)	%	100			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	94			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	93			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	103			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	103			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	85			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	100			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	89			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	94			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	94			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	101			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	82			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	114			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorooctane sulfonamide (FOSA)	%	82			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	112			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	92			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	94			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	88			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	87			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	90			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	92			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	82			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	85			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	99			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	94			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	101			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	99			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	68			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	97			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)	%	101			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	92			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	89			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	99			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	97			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	84			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	98			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	84			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	88			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	90			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	94			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	67			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	113			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	79			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	100			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	89			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	90			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	85			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	84			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	93			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	85			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	77			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	80			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	97			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	88			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	102			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorooctanesulfonic acid (PFOS)	%	86			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	61			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	93			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	99			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	92			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	88			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	98			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	92			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	105			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	91			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	102			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	90			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	89			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	89			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	90			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	82			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	112			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	87			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	110			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	121			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	101			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	101			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	89			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	104			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	87			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	103			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	103			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	111			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	104			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	100			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	100			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	86			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	102			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	105			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	102			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	106			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	89			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	98			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	97			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	83			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	95			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	86			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorodecanoic acid (PFDA)	%	89			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	91			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	96			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	68			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	116			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	81			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	106			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	101			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	100			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	85			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	78			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	98			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	86			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	76			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	84			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	95			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	88			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	96			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	85			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	54			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	91			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	99			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	97			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	87			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	101			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	104			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	110			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	96			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	103			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	96			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	96			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	101			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	104			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	81			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	129			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	100			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	102			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	94			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	91			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	105			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	94			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	98			50-150	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	94			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	82			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	105			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	94			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	103			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	109			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	92			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	81			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	102			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	111			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	103			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	114			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	92			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	93			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	102			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	92			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	101			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	85			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	86			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	89			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	93			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	88			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	118			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	81			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	104			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	92			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	130			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	101			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	104			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	114			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	79			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	108			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	97			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	110			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	106			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	89			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	96			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	98			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	91			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	96			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	100			50-150	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	93			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	93			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	104			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	87			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	96			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	87			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	85			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	87			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	92			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	83			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	114			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	93			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	108			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	113			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	105			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	97			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	89			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	102			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	87			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	98			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	99			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	106			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	99			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	98			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	96			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	82			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	98			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	99			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	98			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	100			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)	M24-De0002414	CP	%	90			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0002414	CP	%	93			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0002414	CP	%	85			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0002414	CP	%	86			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0002414	CP	%	86			50-150	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002414	CP	%	82			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002414	CP	%	84			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002414	CP	%	88			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002414	CP	%	96			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002414	CP	%	67			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002414	CP	%	112			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M24-De0002414	CP	%	81			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002414	CP	%	77			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002414	CP	%	105			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002414	CP	%	83			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002414	CP	%	84			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002414	CP	%	79			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002414	CP	%	89			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M24-De0002414	CP	%	93			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0002414	CP	%	82			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002414	CP	%	103			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002414	CP	%	96			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002414	CP	%	92			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0002414	CP	%	73			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002414	CP	%	86			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002414	CP	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002414	CP	%	88			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002414	CP	%	93			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances- Trace				Result 1					
Perfluorooctane sulfonamide (FOSA)	M24-De0002430	CP	%	85			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002430	CP	%	92			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002430	CP	%	79			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002430	CP	%	93			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs) - Trace				Result 1					
Perfluorobutanoic acid (PFBA)	M24-De0002430	CP	%	92			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0002430	CP	%	100			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0002430	CP	%	100			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0002430	CP	%	88			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorooctanoic acid (PFOA)	M24-De0002430	CP	%	98			50-150	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002430	CP	%	89			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002430	CP	%	93			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002430	CP	%	73			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002430	CP	%	96			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002430	CP	%	100			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002430	CP	%	123			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)- Trace				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M24-De0002430	CP	%	85			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0002430	CP	%	67			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002430	CP	%	82			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002430	CP	%	114			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0002430	CP	%	91			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002430	CP	%	114			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-De0002430	CP	%	52			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- Trace				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002430	CP	%	94			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002430	CP	%	96			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002430	CP	%	97			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002430	CP	%	92			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluoroheptanoic acid (PFHpA)	M24-De0002437	CP	%	92			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0002437	CP	%	90			50-150	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002437	CP	%	92			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002437	CP	%	85			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002437	CP	%	99			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002437	CP	%	97			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002437	CP	%	72			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002437	CP	%	129			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M24-De0002437	CP	%	90			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002437	CP	%	87			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002437	CP	%	91			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002437	CP	%	83			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002437	CP	%	93			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002437	CP	%	94			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002437	CP	%	92			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M24-De0002437	CP	%	57			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0002437	CP	%	84			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002437	CP	%	120			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002437	CP	%	100			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0002437	CP	%	93			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002437	CP	%	118			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0002437	CP	%	64			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002437	CP	%	104			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002437	CP	%	96			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002437	CP	%	97			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002437	CP	%	99			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	M24-De0002468	CP	%	98			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0002468	CP	%	137			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0002468	CP	%	77			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0002468	CP	%	90			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0002468	CP	%	147			50-150	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002468	CP	%	91			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002468	CP	%	94			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002468	CP	%	98			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002468	CP	%	101			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002468	CP	%	55			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002468	CP	%	128			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M24-De0002468	CP	%	82			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002468	CP	%	112			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002468	CP	%	104			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002468	CP	%	101			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002468	CP	%	100			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002468	CP	%	75			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002468	CP	%	94			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorononanesulfonic acid (PFNS)	M24-De0002468	CP	%	73			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002468	CP	%	144			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002468	CP	%	92			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002468	CP	%	94			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002468	CP	%	99			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002468	CP	%	94			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	M24-De0002488	CP	%	99			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0002488	CP	%	117			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0002488	CP	%	99			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0002488	CP	%	126			50-150	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002488	CP	%	91			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002488	CP	%	85			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002488	CP	%	90			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002488	CP	%	86			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002488	CP	%	74			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002488	CP	%	107			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M24-De0002488	CP	%	89			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002488	CP	%	99			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002488	CP	%	85			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002488	CP	%	89			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002488	CP	%	92			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002488	CP	%	85			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002488	CP	%	110			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M24-De0002488	CP	%	115			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0002488	CP	%	82			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002488	CP	%	125			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002488	CP	%	118			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002488	CP	%	136			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0002488	CP	%	56			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002488	CP	%	95			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002488	CP	%	95			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002488	CP	%	97			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002488	CP	%	97			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-De0002413	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0002413	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0002413	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0002413	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0002413	CP	ug/L	0.01	0.01	8.0	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002413	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002413	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002413	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002413	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002413	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002413	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-De0002413	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002413	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002413	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002413	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002413	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002413	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002413	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-De0002413	CP	ug/L	0.07	0.08	4.0	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0002413	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002413	CP	ug/L	0.03	0.03	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002413	CP	ug/L	0.07	0.08	8.0	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0002413	CP	ug/L	0.53	0.56	6.0	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002413	CP	ug/L	0.02	0.02	2.0	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-De0002413	CP	ug/L	0.63	0.61	4.0	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0002413	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002413	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002413	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002413	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002413	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-De0002423	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-De0002423	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002423	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002423	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002423	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002423	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002423	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002423	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0002423	CP	ug/L	0.02	0.02	5.0	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-De0002423	CP	ug/L	0.03	0.03	13	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002423	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002423	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-De0002424	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-De0002424	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002424	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002424	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002424	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002424	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002424	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002424	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0002424	CP	ug/L	0.03	0.03	10	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002424	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002424	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances- Trace				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-De0002429	CP	ug/L	< 0.005	< 0.005	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002429	CP	ug/L	< 0.005	< 0.005	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002429	CP	ug/L	< 0.005	< 0.005	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002429	CP	ug/L	< 0.005	< 0.005	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002429	CP	ug/L	< 0.005	< 0.005	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002429	CP	ug/L	< 0.005	< 0.005	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002429	CP	ug/L	< 0.005	< 0.005	<1	30%	Pass	

Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs) - Trace				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-De0002429	CP	ug/L	0.005	0.005	1.0	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0002429	CP	ug/L	0.003	0.003	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0002429	CP	ug/L	0.007	0.007	1.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0002429	CP	ug/L	0.002	0.002	2.0	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0002429	CP	ug/L	0.006	0.005	2.0	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002429	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002429	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002429	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002429	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002429	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002429	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)- Trace				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-De0002429	CP	ug/L	0.007	0.005	35	30%	Fail	Q15
Perfluorononanesulfonic acid (PFNS)	M24-De0002429	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002429	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002429	CP	ug/L	0.005	0.004	5.0	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0002429	CP	ug/L	0.027	0.027	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002429	CP	ug/L	< 0.001	0.001	10	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-De0002429	CP	ug/L	0.020	0.018	12	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0002429	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- Trace				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002429	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002429	CP	ug/L	< 0.005	< 0.005	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002429	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002429	CP	ug/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-De0002457	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0002457	CP	ug/L	0.01	< 0.01	48	30%	Fail	Q15
Perfluorohexanoic acid (PFHxA)	M24-De0002457	CP	ug/L	0.01	0.01	4.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-De0002457	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002457	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002457	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002457	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002457	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002457	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002457	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0002457	CP	ug/L	0.05	0.05	4.0	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-De0002457	CP	ug/L	0.11	0.10	2.0	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002457	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002457	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-De0002467	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-De0002467	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002467	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002467	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002467	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002467	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002467	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002467	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0002467	CP	ug/L	0.03	0.03	3.0	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-De0002467	CP	ug/L	0.04	0.04	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002467	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002467	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-De0002477	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-De0002477	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002477	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002477	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002477	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002477	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002477	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002477	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002477	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002477	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-De0002478	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0002478	CP	ug/L	0.09	0.07	27	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0002478	CP	ug/L	0.07	0.05	36	30%	Fail	Q15
Perfluoroheptanoic acid (PFHpA)	M24-De0002478	CP	ug/L	0.01	< 0.01	35	30%	Fail	Q15
Perfluorooctanoic acid (PFOA)	M24-De0002478	CP	ug/L	0.03	0.02	33	30%	Fail	Q15
Perfluorononanoic acid (PFNA)	M24-De0002478	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002478	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002478	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002478	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002478	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002478	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-De0002478	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002478	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002478	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002478	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002478	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002478	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002478	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-De0002478	CP	ug/L	0.01	0.01	31	30%	Fail	Q15
Perfluorononanesulfonic acid (PFNS)	M24-De0002478	CP	ug/L	0.01	< 0.01	70	30%	Fail	Q15
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002478	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002478	CP	ug/L	0.02	0.01	35	30%	Fail	Q15
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002478	CP	ug/L	0.01	< 0.01	39	30%	Fail	Q15
Perfluorodecanesulfonic acid (PFDS)	M24-De0002478	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002478	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002478	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002478	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002478	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-De0002487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0002487	CP	ug/L	0.01	0.01	10	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-De0002487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-De0002487	CP	ug/L	0.02	0.02	13	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002487	CP	ug/L	0.01	0.01	4.0	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002487	CP	ug/L	0.02	0.02	1.0	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0002487	CP	ug/L	0.19	0.17	8.0	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-De0002487	CP	ug/L	0.23	0.31	27	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-De0002497	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-De0002497	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002497	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002497	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002497	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002497	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002497	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002497	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002497	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002497	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-De0002507	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0002507	CP	ug/L	0.06	0.05	10	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0002507	CP	ug/L	0.31	0.29	7.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0002507	CP	ug/L	0.03	0.02	10	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0002507	CP	ug/L	0.09	0.08	7.0	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-De0002507	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0002507	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0002507	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0002507	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0002507	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0002507	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-De0002507	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0002507	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0002507	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0002507	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0002507	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0002507	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0002507	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-De0002507	CP	ug/L	0.13	0.12	9.0	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0002507	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0002507	CP	ug/L	0.06	0.05	9.0	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0002507	CP	ug/L	0.18	0.17	7.0	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0002507	CP	ug/L	2.0	1.9	5.0	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0002507	CP	ug/L	0.09	0.09	2.0	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-De0002507	CP	ug/L	2.8	3.9	32	30%	Fail	Q15
Perfluorodecanesulfonic acid (PFDS)	M24-De0002507	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0002507	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0002507	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0002507	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0002507	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Report 1166588-W-V2 (amendment to report 1166588-W) has been issued with revised results for Pfas on all request samples, following repeat analysis.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N09	Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:



Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Chain of Custody

JBS&G

PROJECT NO.: VIC_0445_PFASOMP_24A	LABORATORY BATCH NO.:
PROJECT NAME: Bandiana PFAS OMP	SAMPLERS: [redacted]
DATE NEEDED BY: Standard TAT	QC LEVEL: NEPM (2013)
PHONE: Sydney 02 8245 0300 | Perth 08 9488 0100 | Brisbane 07 3211 5350 | Melbourne 03 9642 0599 | Adelaide 08 8431 7113	
SEND REPORT & INVOICE TO: (1) jscott@jbsg.com.au; (2) ehellawell@jbsg.com.au; (3) tdufty@jbsg.com.au	

IMS

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Please forward all samples along with this COC to Envirolab

	SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	PFAS (28)		HOLD														TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
1	0445_QC202_241129	Water	29/11/24		1 PFAS bottle		X																		
2	0445_QC201_241128	Water	28/11/24		1 PFAS bottle		X																		
3	0445_QC202_241128	Water	28/11/24		1 PFAS bottle		X																		
4	0445_QC201_241129	Water	29/11/24		1 PFAS bottle		X																		
5	0445_QC201_241125	Water	25/11/24		1 PFAS bottle				X																
6	0445_QC201_241126	Water	26/11/24		1 PFAS bottle		X																		
7	0445_QC202_241126	Water	26/11/24		1 PFAS bottle		X																		
8	0445_QC203_241126	Water	26/11/24		1 PFAS bottle		X																		
9	0445_QC202_241127	Water	27/11/24		1 PFAS bottle		X																		

Envirolab Services
ENVIROLAB 12 Ashley Street
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: MFL0040

Date Received: 3/12/24
Time Received: 10m
Received By: AG
Temp: Cool/Ambient 11.0°C
Cooling: Ice/Icepack
Security: Intact/Broken/(None)

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
[redacted]	CONSIGNMENT NOTE NO. TRANSPORT CO.	NAME: DATE: OF:	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C
	CONSIGNMENT NOTE NO. TRANSPORT CO	NAME: DATE: OF:	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

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Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph +61 3 9763 2500
melbourne@envirolab.com.au
www.envirolab.com.au

Sample Receipt Advice MFL0040

Client Details

Client	JBS & G Australia Pty Ltd (Melbourne)
Attention	[redacted]

Sample Login Details

Your Reference	VIC_0445_PFASOMP_24A
Envirolab Reference	MFL0040
Date Sample Received	03/12/2024
Date Instructions Received	0 /12/2024
Date Final Results Expected	10/12/2024

Sample Condition

Samples received in appropriate condition for analysis	Yes
Number of Samples	9 Water
Turnaround Time	5 Days
Temperatures / Cooling Methods	11.0°C Ice Pack

Additional Info

Sample storage - waters are routinely disposed at approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Where no sampling date has been supplied for some or all samples, the date of sample receipt has been used as the associated sampling date. The sampling dates are used to assess compliance to recommended Technical Holding Times.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default).

Please direct any queries to:

[redacted]

Phone 03 9763 2500
Email [redacted]

[redacted]

Phone 03 9763 2500
Email [redacted]

Analysis underway, details on the following page

Sample Receipt Advice MFL0040

Analysis Grid

The • indicates the testing you have requested. ***THIS IS NOT A REPORT OF THE RESULTS.***

	PFAS-Extended	On Hold
MFL0040-01 Water | 29/11/2024 0445_QC202_241129	•	
MFL0040-02 Water | 28/11/2024 0445_QC201_241128	•	
MFL0040-03 Water | 28/11/2024 0445_QC202_241128	•	
MFL0040-04 Water | 29/11/2024 0445_QC201_241129	•	
MFL0040-05 Water | 25/11/2024 0445_QC201_241125		•
MFL0040-06 Water | 26/11/2024 0445_QC201_241126	•	
MFL0040-07 Water | 26/11/2024 0445_QC202_241126	•	
MFL0040-08 Water | 26/11/2024 0445_QC203_241126	•	
MFL0040-09 Water | 27/11/2024 0445_QC202_241127	•	

Suite Details

Suite Name	Suite Analyses
PFAS-Extended |Water	PFAS EXT-ISTD, PFAS-Extended

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph +61 3 9763 2500
melbourne@envirolab.com.au
www.envirolab.com.au

Certificate of Analysis MFL0040

Client Details

Client	JBS & G Australia Pty Ltd (Melbourne)
Contact	[redacted]
Address	19/31 Queen St, MELBOURNE, VIC, 3000

Sample Details

Your Reference	VIC_0445_PFASOMP_24A
Number of Samples	9 Water
Date Samples Received	03/12/2024
Date Instructions Received	03/12/2024

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for soils and on an as received basis for other matrices.

Report Details

Date Results Requested by	10/12/2024
Date of Issue	10/12/2024

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Accredited for compliance with ISO/IEC 17025. Tests not covered by NATA are denoted with *.

Authorisation Details

Results Approved By	[redacted], Chemist
Laboratory Manager	[redacted]

Samples in this Report

Envirolab ID	Sample ID	Matrix	Date Sampled	Date Received
MFL0040-01	0445_QC202_241129	Water	29/11/2024	03/12/2024
MFL0040-02	0445_QC201_241128	Water	28/11/2024	03/12/2024
MFL0040-03	0445_QC202_241128	Water	28/11/2024	03/12/2024
MFL0040-04	0445_QC201_241129	Water	29/11/2024	03/12/2024
MFL0040-05	0445_QC201_241125	Water	25/11/2024	03/12/2024
MFL0040-06	0445_QC201_241126	Water	26/11/2024	03/12/2024
MFL0040-07	0445_QC202_241126	Water	26/11/2024	03/12/2024
MFL0040-08	0445_QC203_241126	Water	26/11/2024	03/12/2024
MFL0040-09	0445_QC202_241127	Water	27/11/2024	03/12/2024

PFAS Extended List (Low Level) (Water) - Analysed By Envirolab Services Sydney

Envirolab ID	Units	PQL	MFL0040-01	MFL0040-02	MFL0040-03	MFL0040-04	MFL0040-06
Your Reference			0445_QC202_2 41129	0445_QC201_2 41128	0445_QC202_2 41128	0445_QC201_2 41129	0445_QC201_2 41126
Date Sampled			29/11/2024	28/11/2024	28/11/2024	29/11/2024	26/11/2024
Perfluorobutanesulfonic acid (PFBS)	µg/L	0.010	<0.010	0.14	<0.010	<0.010	0.065
Perfluoropentanesulfonic acid (PFPeS)	µg/L	0.010	<0.010	0.17	<0.010	<0.010	0.026
Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.010	0.081	1.8	0.026	0.026	0.66
Perfluoroheptanesulfonic acid (PFHpS)	µg/L	0.010	0.015	0.096	<0.010	<0.010	0.025
Perfluorooctanesulfonic acid (PFOS)	µg/L	0.010	0.40	2.3	0.017	0.13	1.1
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	0.019
Perfluorobutanoic acid (PFBA)	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	0.082
Perfluoropentanoic acid (PFPeA)	µg/L	0.010	<0.010	0.045	<0.010	<0.010	0.075
Perfluorohexanoic acid (PFHxA)	µg/L	0.010	0.023	0.26	<0.010	<0.010	0.092
Perfluoroheptanoic acid (PFHpA)	µg/L	0.010	<0.010	0.025	<0.010	<0.010	0.015
Perfluorooctanoic acid (PFOA)	µg/L	0.010	<0.010	0.078	<0.010	<0.010	0.031
Perfluorononanoic acid (PFNA)	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Perfluorodecanoic acid (PFDA)	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Perfluorododecanoic acid (PFDoDA)	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	0.011
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.050	0.20	<0.050	<0.050	<0.050	<0.050
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Perfluorooctane sulfonamide (FOSA)	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
N-Methyl perfluorooctane sulfonamidoethanol	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050
N-Ethyl perfluorooctane sulfonamidoethanol	µg/L	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
N-Methyl perfluorooctane sulfonamidoacetic acid	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050
N-Ethyl perfluorooctane sulfonamidoacetic acid	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Surrogate 13C8 PFOS	%		*100*	*110*	*96.2*	*100*	*104*
Surrogate 13C2 PFOA	%		*95.6*	*108*	*101*	*90.6*	*103*
Extraction Internal Standard 13C3 PFBS	%		*116*	*100*	*113*	*110*	*120*
Extraction Internal Standard 18O2 PFHxS	%		*104*	*99.0*	*127*	*124*	*106*
Extraction Internal Standard 13C4 PFOS	%		*121*	*97.0*	*127*	*117*	*107*
Extraction Internal Standard 13C4 PFBA	%		*## [1]*	*78.0*	*96.0*	*97.0*	*20.0 [1]*
Extraction Internal Standard 13C3 PFPeA	%		*136*	*136*	*129*	*119*	*63.0*
Extraction Internal Standard 13C2 PFHxA	%		*110*	*100*	*115*	*109*	*69.0*
Extraction Internal Standard 13C4 PFHpA	%		*124*	*101*	*126*	*115*	*87.0*
Extraction Internal Standard 13C4 PFOA	%		*102*	*100*	*107*	*107*	*93.0*
Extraction Internal Standard 13C5 PFNA	%		*114*	*80.0*	*120*	*113*	*89.0*
Extraction Internal Standard 13C2 PFDA	%		*139*	*129*	*130*	*121*	*134*
Extraction Internal Standard 13C2 PFUnDA	%		*139*	*132*	*140*	*125*	*140*
Extraction Internal Standard 13C2 PFDoDA	%		*104*	*122*	*115*	*114*	*109*

PFAS Extended List (Low Level) (Water) - Analysed By Envirolab Services Sydney

Envirolab ID	Units	PQL	MFL0040-01	MFL0040-02	MFL0040-03	MFL0040-04	MFL0040-06
Your Reference			0445_QC202_2 41129	0445_QC201_2 41128	0445_QC202_2 41128	0445_QC201_2 41129	0445_QC201_2 41126
Date Sampled			29/11/2024	28/11/2024	28/11/2024	29/11/2024	26/11/2024
Extraction Internal Standard 13C2 PFTeDA	%		*135*	*137*	*122*	*153 [1]*	*121*
Extraction Internal Standard 13C2 4:2FTS	%		*159 [1]*	*141*	*138*	*130*	*79.0*
Extraction Internal Standard 13C2 6:2FTS	%		*80.0*	*158 [1]*	*157 [1]*	*156 [1]*	*140*
Extraction Internal Standard 13C2 8:2FTS	%		*## [1]*	*192 [1]*	*173 [1]*	*176 [1]*	*184 [1]*
Extraction Internal Standard 13C8 FOSA	%		*114*	*140*	*141*	*135*	*181 [1]*
Extraction Internal Standard d3 N MeFOSA	%		*100*	*103*	*106*	*102*	*110*
Extraction Internal Standard d5 N EtFOSA	%		*99.0*	*100*	*105*	*101*	*111*
Extraction Internal Standard d7 N MeFOSE	%		*103*	*103*	*107*	*102*	*103*
Extraction Internal Standard d9 N EtFOSE	%		*99.0*	*96.0*	*109*	*108*	*105*
Extraction Internal Standard d3 N MeFOSAA	%		*37.0 [1]*	*123*	*112*	*124*	*117*
Extraction Internal Standard d5 N EtFOSAA	%		*130*	*183 [1]*	*167 [1]*	*182 [1]*	*## [1]*

Envirolab ID	Units	PQL	MFL0040-07	MFL0040-08	MFL0040-09
Your Reference			0445_QC202_2 41126	0445_QC203_2 41126	0445_QC202_2 41127
Date Sampled			26/11/2024	26/11/2024	27/11/2024
Perfluorobutanesulfonic acid (PFBS)	µg/L	0.010	<0.010	<0.010	<0.010
Perfluoropentanesulfonic acid (PFPeS)	µg/L	0.010	<0.010	<0.010	<0.010
Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.010	<0.010	<0.010	0.028
Perfluoroheptanesulfonic acid (PFHpS)	µg/L	0.010	<0.010	<0.010	<0.010
Perfluorooctanesulfonic acid (PFOS)	µg/L	0.010	0.018	<0.010	0.045
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.010	<0.010	<0.010	<0.010
Perfluorobutanoic acid (PFBA)	µg/L	0.050	<0.050	<0.050	<0.050
Perfluoropentanoic acid (PFPeA)	µg/L	0.010	<0.010	<0.010	<0.010
Perfluorohexanoic acid (PFHxA)	µg/L	0.010	<0.010	<0.010	<0.010
Perfluoroheptanoic acid (PFHpA)	µg/L	0.010	<0.010	<0.010	<0.010
Perfluorooctanoic acid (PFOA)	µg/L	0.010	<0.010	<0.010	<0.010
Perfluorononanoic acid (PFNA)	µg/L	0.010	<0.010	<0.010	<0.010
Perfluorodecanoic acid (PFDA)	µg/L	0.010	<0.010	<0.010	<0.010
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.010	<0.010	<0.010	<0.010
Perfluorododecanoic acid (PFDoDA)	µg/L	0.010	<0.010	<0.010	<0.010
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.010	<0.010	<0.010	<0.010
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.050	<0.050	<0.050	<0.050
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.010	<0.010	<0.010	<0.010
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.050	<0.050	<0.050	<0.050
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.010	<0.010	<0.010	<0.010
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.010	<0.010	<0.010	<0.010
Perfluorooctane sulfonamide (FOSA)	µg/L	0.050	<0.050	<0.050	<0.050
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.050	<0.050	<0.050	<0.050
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.10	<0.10	<0.10	<0.10
N-Methyl perfluorooctane sulfonamidoethanol	µg/L	0.050	<0.050	<0.050	<0.050
N-Ethyl perfluorooctane sulfonamidoethanol	µg/L	0.50	<0.50	<0.50	<0.50
N-Methyl perfluorooctane sulfonamidoacetic acid	µg/L	0.050	<0.050	<0.050	<0.050

PFAS Extended List (Low Level) (Water) - Analysed By Envirolab Services Sydney

Envirolab ID	Units	PQL	MFL0040-07	MFL0040-08	MFL0040-09
Your Reference			0445_QC202_241126	0445_QC203_241126	0445_QC202_241127
Date Sampled			26/11/2024	26/11/2024	27/11/2024
N-Ethyl perfluorooctane sulfonamidoacetic acid	µg/L	0.050	<0.050	<0.050	<0.050
Surrogate 13C8 PFOS	%		*103*	*99.6*	*93.6*
Surrogate 13C2 PFOA	%		*98.4*	*101*	*106*
Extraction Internal Standard 13C3 PFBS	%		*122*	*121*	*122*
Extraction Internal Standard 18O2 PFHxS	%		*146*	*152 [1]*	*157 [1]*
Extraction Internal Standard 13C4 PFOS	%		*118*	*124*	*126*
Extraction Internal Standard 13C4 PFBA	%		*71.0*	*99.0*	*52.0*
Extraction Internal Standard 13C3 PFPeA	%		*129*	*141*	*114*
Extraction Internal Standard 13C2 PFHxA	%		*109*	*110*	*104*
Extraction Internal Standard 13C4 PFHpA	%		*119*	*129*	*121*
Extraction Internal Standard 13C4 PFOA	%		*112*	*111*	*108*
Extraction Internal Standard 13C5 PFNA	%		*114*	*122*	*118*
Extraction Internal Standard 13C2 PFDA	%		*152 [1]*	*133*	*150 [1]*
Extraction Internal Standard 13C2 PFUnDA	%		*151 [1]*	*143*	*158 [1]*
Extraction Internal Standard 13C2 PFDoDA	%		*139*	*136*	*130*
Extraction Internal Standard 13C2 PFTeDA	%		*151 [1]*	*146*	*149*
Extraction Internal Standard 13C2 4:2FTS	%		*135*	*149*	*125*
Extraction Internal Standard 13C2 6:2FTS	%		*178 [1]*	*175 [1]*	*192 [1]*
Extraction Internal Standard 13C2 8:2FTS	%		*## [1]*	*190 [1]*	*## [1]*
Extraction Internal Standard 13C8 FOSA	%		*174 [1]*	*167 [1]*	*173 [1]*
Extraction Internal Standard d3 N MeFOSA	%		*111*	*109*	*112*
Extraction Internal Standard d5 N EtFOSA	%		*109*	*103*	*114*
Extraction Internal Standard d7 N MeFOSE	%		*105*	*104*	*102*
Extraction Internal Standard d9 N EtFOSE	%		*103*	*93.0*	*104*
Extraction Internal Standard d3 N MeFOSAA	%		*122*	*116*	*140*
Extraction Internal Standard d5 N EtFOSAA	%		*## [1]*	*199 [1]*	*## [1]*

Result Comments

Identifier	Description
[1]	For PFAS Extracted Internal Standards denoted with ## or being outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

Method Summary

Method ID	Methodology Summary
ORG-029	Soil/solid and sorbent samples are extracted with basified Methanol. Waters and soil/sorbent extracts are directly injected and/or concentrated/extracted using SPE. TCLP/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MSMS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

Result Definitions

Identifier	Description
NR	Not reported
NEPM	National Environment Protection Measure
NS	Not specified
LCS	Laboratory Control Sample
RPD	Relative Percent Difference
>	Greater than
<	Less than
PQL	Practical Quantitation Limit
INS	Insufficient sample for this test
NA	Test not required
NT	Not tested
DOL	Samples rejected due to particulate overload (air filters only)
RFD	Samples rejected due to filter damage (air filters only)
RUD	Samples rejected due to uneven deposition (air filters only)
##	Indicates a laboratory acceptance criteria outlier, for further details, see Result Comments and/or QC Comments

Quality Control Definitions

Blank

This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, and is determined by processing solvents and reagents in exactly the same manner as for samples.

Surrogate Spike

Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

LCS (Laboratory Control Sample)

This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Matrix Spike

A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

Duplicate

This is the complete duplicate analysis of a sample from the process batch. The sample selected should be one where the analyte concentration is easily measurable.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria. Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction. Spikes for Physical and Aggregate Tests are not applicable. For VOCs in water samples, three vials are required for duplicate or spike analysis.

General Acceptance Criteria (GAC) - Analyte specific criteria applies for some analytes and is reflected in QC recovery tables.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% - see ELN-P05 QAQC tables for details (available on request); <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase. Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was typically insufficient in order to satisfy laboratory QA/QC protocols.

Miscellaneous Information

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached. We have taken the sampling date as being the date received at the laboratory.

Two significant figures are reported for the majority of tests and with a high degree of confidence, for results <10*PQL, the second significant figure may be in doubt i.e. has a relatively high degree of uncertainty and is provided for information only.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS where sediment/solids are included by default.

Urine Analysis - The BEI values listed are taken from the 2022 edition of *TLVs and BEIs Threshold Limits by ACGIH*.

Air volume measurements are not covered by Envirolab's NATA accreditation.

Data Quality Assessment Summary MFL0040

Client Details

Client	JBS & G Australia Pty Ltd (Melbourne)
Your Reference	VIC_0445_PFASOMP_24A
Date Issued	10/12/2024

Recommended Holding Time Compliance

No recommended holding time exceedances

Quality Control and QC Frequency

QC Type	Compliant	Details
Blank	Yes	No Outliers
LCS	Yes	No Outliers
Duplicates	Yes	No Outliers
Matrix Spike	Yes	No Outliers
Surrogates / Extracted Internal Standards	No	Surrogates / Extracted ISTD Outliers Exist - See detailed list below
QC Frequency	No	QC Frequency Outliers Exist - See detailed list below

Surrogates/Extracted Internal Standards, Duplicates and/or Matrix Spikes are not always relevant/applicable to certain analyses and matrices. Therefore, said QC measures are deemed compliant in these situations by default. See Laboratory Acceptance Criteria for more information

Data Quality Assessment Summary MFL0040

Recommended Holding Time Compliance

Analysis	Sample Number(s)	Date Sampled	Date Extracted	Date Analysed	Compliant
PFAS EXT LL -ISTD | Water	6-8	26/11/2024	10/12/2024	10/12/2024	Yes
	9	27/11/2024	10/12/2024	10/12/2024	Yes
	2-3	28/11/2024	10/12/2024	10/12/2024	Yes
	1, 4	29/11/2024	10/12/2024	10/12/2024	Yes
PFAS-Extended (LL) | Water	6-8	26/11/2024	10/12/2024	10/12/2024	Yes
	9	27/11/2024	10/12/2024	10/12/2024	Yes
	2-3	28/11/2024	10/12/2024	10/12/2024	Yes
	1, 4	29/11/2024	10/12/2024	10/12/2024	Yes

Outliers: Surrogate / Extracted Internal Standards

ORG-029|PFAS Extended List (Low Level) (Matrix)| Batch BFL1638

Sample ID	Analyte	% Limits	% Recovery
MFL0040-01	Extraction Internal Standard 13C2 8:2FTS	50 - 150	## [1]
	Extraction Internal Standard 13C4 PFBA	50 - 150	## [1]
	Extraction Internal Standard d3 N MeFOSAA	50 - 150	37.0 [1]
	Extraction Internal Standard 13C2 4:2FTS	50 - 150	159 [1]
MFL0040-02	Extraction Internal Standard 13C2 6:2FTS	50 - 150	158 [1]
	Extraction Internal Standard 13C2 8:2FTS	50 - 150	192 [1]
	Extraction Internal Standard d5 N EtFOSAA	50 - 150	183 [1]
MFL0040-03	Extraction Internal Standard 13C2 8:2FTS	50 - 150	173 [1]
	Extraction Internal Standard d5 N EtFOSAA	50 - 150	167 [1]
	Extraction Internal Standard 13C2 6:2FTS	50 - 150	157 [1]
MFL0040-04	Extraction Internal Standard 13C2 8:2FTS	50 - 150	176 [1]
	Extraction Internal Standard 13C2 PFTeDA	50 - 150	153 [1]
	Extraction Internal Standard d5 N EtFOSAA	50 - 150	182 [1]
	Extraction Internal Standard 13C2 6:2FTS	50 - 150	156 [1]
MFL0040-06	Extraction Internal Standard d5 N EtFOSAA	50 - 150	## [1]
	Extraction Internal Standard 13C8 FOSA	30 - 150	181 [1]
	Extraction Internal Standard 13C2 8:2FTS	50 - 150	184 [1]
	Extraction Internal Standard 13C4 PFBA	50 - 150	20.0 [1]
MFL0040-07	Extraction Internal Standard 13C2 8:2FTS	50 - 150	## [1]
	Extraction Internal Standard 13C2 PFDA	50 - 150	152 [1]
	Extraction Internal Standard 13C2 PFTeDA	50 - 150	151 [1]
	Extraction Internal Standard 13C2 PFUnDA	50 - 150	151 [1]
	Extraction Internal Standard 13C8 FOSA	30 - 150	174 [1]
	Extraction Internal Standard d5 N EtFOSAA	50 - 150	## [1]
	Extraction Internal Standard 13C2 6:2FTS	50 - 150	178 [1]
MFL0040-08	Extraction Internal Standard 13C2 8:2FTS	50 - 150	190 [1]
	Extraction Internal Standard d5 N EtFOSAA	50 - 150	199 [1]
	Extraction Internal Standard 13C8 FOSA	30 - 150	167 [1]
	Extraction Internal Standard 13C2 6:2FTS	50 - 150	175 [1]
	Extraction Internal Standard 18O2 PFHxS	50 - 150	152 [1]
MFL0040-09	Extraction Internal Standard d5 N EtFOSAA	50 - 150	## [1]
	Extraction Internal Standard 13C2 6:2FTS	50 - 150	192 [1]
	Extraction Internal Standard 13C2 8:2FTS	50 - 150	## [1]
	Extraction Internal Standard 13C2 PFUnDA	50 - 150	158 [1]
	Extraction Internal Standard 13C8 FOSA	30 - 150	173 [1]
	Extraction Internal Standard 18O2 PFHxS	50 - 150	157 [1]

Outliers: QC Frequency

ORG-029|PFAS Extended List (Low Level) (Water)| Batch BFL1638

Analysis	QC Type	Expected	Reported
PFAS EXT LL -ISTD	Matrix Spike	1	0
PFAS-Extended (LL)	Matrix Spike	1	0

ORG-029|PFAS Extended List (Low Level) (Water) | Batch BFL1638

Analyte	Units	PQL	Blank	DUP1 MFL0040-01 Samp | QC | RPD %	LCS %
Perfluorobutanesulfonic acid (PFBS)	µg/L	0.010	<0.010	<0.010 | <0.010 | [NA]	96.0
Perfluoropentanesulfonic acid (PFPeS)	µg/L	0.010	<0.010	<0.010 | <0.010 | [NA]	94.7
Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.010	<0.010	0.0814 | 0.0730 | 10.9	91.6
Perfluoroheptanesulfonic acid (PFHpS)	µg/L	0.010	<0.010	0.0154 | 0.0149 | [NA]	94.5
Perfluorooctanesulfonic acid (PFOS)	µg/L	0.010	<0.010	0.397 | 0.375 | 5.75	95.0
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.010	<0.010	<0.010 | <0.010 | [NA]	99.1
Perfluorobutanoic acid (PFBA)	µg/L	0.050	<0.050	<0.050 | <0.050 | [NA]	96.6
Perfluoropentanoic acid (PFPeA)	µg/L	0.010	<0.010	<0.010 | <0.010 | [NA]	98.2
Perfluorohexanoic acid (PFHxA)	µg/L	0.010	<0.010	0.0231 | 0.0217 | [NA]	99.7
Perfluoroheptanoic acid (PFHpA)	µg/L	0.010	<0.010	<0.010 | <0.010 | [NA]	91.5
Perfluorooctanoic acid (PFOA)	µg/L	0.010	<0.010	<0.010 | <0.010 | [NA]	96.7
Perfluorononanoic acid (PFNA)	µg/L	0.010	<0.010	<0.010 | <0.010 | [NA]	97.3
Perfluorodecanoic acid (PFDA)	µg/L	0.010	<0.010	<0.010 | <0.010 | [NA]	94.9
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.010	<0.010	<0.010 | <0.010 | [NA]	87.6
Perfluorododecanoic acid (PFDoDA)	µg/L	0.010	<0.010	<0.010 | <0.010 | [NA]	97.3
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.010	<0.010	<0.010 | <0.010 | [NA]	120
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.050	<0.050	<0.050 | <0.050 | [NA]	88.4
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.010	<0.010	<0.010 | <0.010 | [NA]	94.9
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.050	<0.050	0.204 | 0.182 | [NA]	96.9
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.010	<0.010	<0.010 | <0.010 | [NA]	89.6
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.010	<0.010	<0.010 | <0.010 | [NA]	138
Perfluorooctane sulfonamide (FOSA)	µg/L	0.050	<0.050	<0.050 | <0.050 | [NA]	100
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.050	<0.050	<0.050 | <0.050 | [NA]	107
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.10	<0.10	<0.10 | <0.10 | [NA]	114
N-Methyl perfluorooctane sulfonamidoethanol	µg/L	0.050	<0.050	<0.050 | <0.050 | [NA]	104
N-Ethyl perfluorooctane sulfonamidoethanol	µg/L	0.50	<0.50	<0.50 | <0.50 | [NA]	115
N-Methyl perfluorooctane sulfonamidoacetic acid	µg/L	0.050	<0.050	<0.050 | <0.050 | [NA]	105
N-Ethyl perfluorooctane sulfonamidoacetic acid	µg/L	0.050	<0.050	<0.050 | <0.050 | [NA]	94.9
Surrogate 13C8 PFOS	%		*109*	*100 | 97.0*	*106*
Surrogate 13C2 PFOA	%		*97.8*	*95.6 | 102*	*98.5*
Extraction Internal Standard 13C3 PFBS	%		*95.0*	*116 | 134 | 14.4*	*[NA]*
Extraction Internal Standard 18O2 PFHxS	%		*122*	*104 | 103 | 0.966*	*[NA]*
Extraction Internal Standard 13C4 PFOS	%		*118*	*121 | 125 | 3.25*	*[NA]*
Extraction Internal Standard 13C4 PFBA	%		*110*	*## | ## | [NA] [1]*	*[NA]*
Extraction Internal Standard 13C3 PFPeA	%		*113*	*136 | 142 | 4.32*	*[NA]*
Extraction Internal Standard 13C2 PFHxA	%		*112*	*110 | 113 | 2.69*	*[NA]*
Extraction Internal Standard 13C4 PFHpA	%		*120*	*124 | 129 | 3.95*	*[NA]*
Extraction Internal Standard 13C4 PFOA	%		*117*	*102 | 106 | 3.85*	*[NA]*
Extraction Internal Standard 13C5 PFNA	%		*118*	*114 | 119 | 4.29*	*[NA]*
Extraction Internal Standard 13C2 PFDA	%		*121*	*139 | 136 | 2.18*	*[NA]*
Extraction Internal Standard 13C2 PFUnDA	%		*125*	*139 | 133 | 4.41*	*[NA]*
Extraction Internal Standard 13C2 PFDoDA	%		*128*	*104 | 106 | 1.90*	*[NA]*
Extraction Internal Standard 13C2 PFTeDA	%		*94.0*	*135 | 130 | 3.77*	*[NA]*
Extraction Internal Standard 13C2 4:2FTS	%		*130*	*159 | 152 | 4.50 [1]*	*[NA]*
Extraction Internal Standard 13C2 6:2FTS	%		*135*	*80.0 | 81.0 | 1.24*	*[NA]*
Extraction Internal Standard 13C2 8:2FTS	%		*137*	*## | ## | [NA] [1]*	*[NA]*
Extraction Internal Standard 13C8 FOSA	%		*128*	*114 | 122 | 6.78*	*[NA]*
Extraction Internal Standard d3 N MeFOSA	%		*96.0*	*100 | 108 | 7.69*	*[NA]*
Extraction Internal Standard d5 N EtFOSA	%		*95.0*	*99.0 | 106 | 6.83*	*[NA]*
Extraction Internal Standard d7 N MeFOSE	%		*101*	*103 | 101 | 1.96*	*[NA]*
Extraction Internal Standard d9 N EtFOSE	%		*99.0*	*99.0 | 102 | 2.99*	*[NA]*
Extraction Internal Standard d3 N MeFOSAA	%		*117*	*37.0 | 35.0 | 5.56 [1]*	*[NA]*
Extraction Internal Standard d5 N EtFOSAA	%		*144*	*130 | 132 | 1.53*	*[NA]*

QC Comments

Identifier	Description
[1]	For PFAS Extracted Internal Standards denoted with ## or being outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

CHAIN OF CUSTODY RECORD

Eurofins | Environment Testing ABN 50 005 085 521

Sydney Laboratory
179 Magowar Road Girraween NSW 2000
02 9900 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

Perth Laboratory
46-48 Banksia Road Welshpool WA 6106
08 6253 4444 Samples@AELgroup.com.au

Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

Company	JBS & G Australia (VIC) P/L	Project №	VIC_0445_PFASOMP_24A	Project Manager	[redacted]
Address	PO Box 3166 Norwood SA	Project Name	Bendigo OMP	EDD Format	Facility Code
Contact Name	[redacted]				
Phone №					
Special Directions	Sample location IDs have only been placed on the bottles based on space. Please adopt the full sample IDs listed in this COC for the sample names				
Purchase Order					
Quote ID №					

Sampler(s): [redacted]
Handed over by:
Email for invoice:
Email for Results:

Analytes (including suites) (Please tick the boxes below to indicate the analytes required)

Containers (Please indicate the number of containers required)

Required Turnaround Time (TAT) (Please tick the required TAT)

*Surcharges will apply
Overnight (reporting by 9am)e
Same day
1 day
2 days
3 days
5 days (Standard)
Other

№	Client Sample ID	Sampled Date/Time	Matrix	Per- and Polyfluoroalkyl Substances (PFASs) Full - STD Level	Per- and Polyfluoroalkyl Substances (PFASs) Full - Trace Level	500mL Plastic	250mL Plastic	125mL Plastic	250mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Subsoil/Irrig)	Sample Comments / Dangerous Goods Hazard Warning
1	0445_SW396_241204	4/12/24	Water	X							1			
2	0445E_MW052_241203	3/12/24	Water	X										
3	0445E_MW403_241203	3/12/24	Water	X										
4	0445E_MW404_241203	3/12/24	Water	X										
5	0445E_MW350S_241203	3/12/24	Water	X										
6	0445E_MW350S_241203	3/12/24	Water	X										
7	0445E_MW353_241204	4/12/24	Water	X										
8	0445E_MW026_241203	3/12/24	Water	X										
9	0445E_MW016_241203	3/12/24	Water	X										
10	0445E_MW035_241203	3/12/24	Water	X										
11	0445E_MW009_241203	3/12/24	Water	X										
12	0445E_MW043_241203	3/12/24	Water	X										
13	0445E_MW042_241204	4/12/24	Water	X										
14	0445E_MW012_241203	3/12/24	Water	X										
15	0445E_MW029_241203	3/12/24	Water	X										
16	0445N_MW346_241203	3/12/24	Water	X										
17	0445N_MW345_241203	3/12/24	Water	X										
18	0445_MW313_241204	4/12/24	Water	X										

19	0445S_MW056_241204	4/12/24	Water	X																									
20	0445_MW356_241204	4/12/24	Water	X																									
21	0445_QC101_241203	3/12/24	Water	X																									
22	0445_QC201_241203	3/12/24	Water																										Forward to Envirolab
23	0445_QC102_241203	3/12/24	Water																										Hold
24	0445_QC202_241203	3/12/24	Water																										Forward to Envirolab
25	0445_QC301_241203	3/12/24	Water	X																									
26	0445_QC401_241203	3/12/24	Water	X																									
27	0445_QC101_241204	4/12/24	Water	X																									
28	0445_QC201_241204	4/12/24	Water																										Forward to Envirolab
29	0445_QC301_241204	4/12/24	Water	X																									
30	0445_QC401_241204	4/12/24	Water	X																									
31	0445_QC501_241206	4/12/24	Water	X																									
32																													
33																													
34																													
35																													
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46																													
47																													

CHAIN OF CUSTODY RECORD

Eurofins | Environment Testing ABN 50 005 085 521

Sydney Laboratory
179 Magowar Road Girraween NSW 2060
02 9900 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

Perth Laboratory
46-48 Banksia Road Welshpool WA 6106
08 6253 4444 Samples@ARLgroup.com.au

Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

Company	JBS & G Australia (VIC) P/L	Project №	61395	Project Manager	[redacted]	Sampler (s)	[redacted]
Address	Level 19, 31 Queen Street, Melbourne, VIC	Project Name		EDD Format (Excel Default)	Esdat	Facility Code	Handed over by
Contact Name	[redacted]						Email for Invoice
Phone №							Email for Results
Special Directions	Please label all samples following this convention IDs: 0445_XXXXX_YYMMDD eg. MW448 = 0445_MW448_241203						
Purchase Order							
Quote ID №							

Analytes (Where multiple analytes are required please specify in the Analytes box below or attach a list)

Containers (Change bottle order if any bottles are required)

Required Turnaround Time (TAT) (Standard TAT is 5 days if not stated)

+Surcharge will apply

☐ Same day+ ☐ 1 day+
☐ 2 days+ ☐ 3 days+
☐ Other(

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	HOLD	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle - Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Gerdale)	Sample Comments / Dangerous Goods Hazard Warning
1	0445_SW398_241204	4/12/24	Water	X						1		
2	0445_MW052_241203	3/12/24	Water	X						1		
3	0445_MW403_241203	3/12/24	Water	X						1		
4	0445_MW404_241203	3/12/24	Water	X						1		
5	0445_MW350S_241203	3/12/24	Water	X						1		
6	0445_MW350S_241203	3/12/24	Water	X						1		
7	0445_MW353_241204	4/12/24	Water	X						1		
8	0445_MW020_241203	3/12/24	Water	X						1		
9	0445_MW016_241203	3/12/24	Water	X						1		
10	0445_MW035_241203	3/12/24	Water	X						1		
11	0445_MW009_241203	3/12/24	Water	X						1		
12	0445_MW043_241203	3/12/24	Water	X						1		
13	0445_MW042_241204	4/12/24	Water	X						1		
14	0445_MW042_241203	3/12/24	Water	X						1		
15	0445_MW029_241203	3/12/24	Water	X						1		
16	0445_MW346_241203	3/12/24	Water	X						1		
17	0445_MW345_241203	3/12/24	Water	X						1		
18	0445_MW313_241204	4/12/24	Water	X						1		
19	0445_MW056_241204	4/12/24	Water	X						1		
20	0445_MW356_241204	4/12/24	Water	X						1		
21	0445_QC101_241203	3/12/24	Water	X						1		
22	0445_QC201_241203	3/12/24	Water	X						1		
23	0445_QC102_241203	3/12/24	Water	X						1		
24	0445_QC202_241203	3/12/24	Water	X						1		
25	0445_QC301_241203	3/12/24	Water	X						1		
26	0445_QC401_241203	3/12/24	Water	X						1		
27	0445_QC101_241204	4/12/24	Water	X						1		
28	0445_QC201_241204	4/12/24	Water	X						1		
29	0445_QC301_241204	4/12/24	Water	X						1		
30	0445_QC401_241204	4/12/24	Water	X						1		
31	0445_QC501_241205	4/12/24	Water	X						1		
32												
33												
	Add Rows		Total Counts	30						31		

Method of Shipment	☐ Courier (# [redacted]		☐ Postal	Name		Signature		Date		Time	
Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time		Temperature	
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time		Report №	

Eurofins Environment Testing Australia Pty Ltd

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request

9/12/24
5:50

DATE:
TIME:
COURIER: R
TEMPERATURE: 15.4C
ATTEMPT TO CHILL: (YES) NO

www.eurofins.com.au EnviroSales@eurofinsanz.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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 NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name: JBS & G Australia (VIC) P/L
Contact name: [redacted]t
Project name: Bandiana OMP
Project ID: VIC_0445_PFASOMP_24A
Turnaround time: 5 Day
Date/Time received Dec 11, 2024 9:37 AM
Eurofins reference 1169993

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 : 15.4 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

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

[redacted]

Results will be delivered electronically via email to [redacted]

Note: A copy of these results will also be delivered to the general JBS & G Australia (VIC) P/L email address.

Global Leader - Results you can trust

JBS & G Australia (VIC) P/L
PO Box 3166
Norwood
SA 5067

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: [redacted]

Report **1169993-W-V2**
Project name Bandiana OMP
Project ID VIC_0445_PFASOMP_24A
Received Date Dec 11, 2024

Client Sample ID			**0445_SW396_241204**	**0445E_MW052_241203**	**0445E_MW403_241203**	**0445E_MW404_241203**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M24-De0026933**	**M24-De0026934**	**M24-De0026935**	**M24-De0026936**
Date Sampled			**Dec 04, 2024**	**Dec 03, 2024**	**Dec 03, 2024**	**Dec 03, 2024**
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	0.05	0.10	1.4	2.1
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.09	0.16	2.2	3.7
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	[N09]0.36	1.1	9.5	18
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.05	[N09]0.21	[N09]1.1	[N09]3.5
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.09	[N09]0.23	[N09]2.3	[N09]8.2
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	0.05	0.04
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	68	102	117	116
13C5-PFPeA (surr.)	1	%	90	115	119	116
13C5-PFHxA (surr.)	1	%	88	74	106	105
13C4-PFHpA (surr.)	1	%	88	98	120	118
13C8-PFOA (surr.)	1	%	100	116	101	99
13C5-PFNA (surr.)	1	%	95	87	82	66
13C6-PFDA (surr.)	1	%	91	96	46	32
13C2-PFUnDA (surr.)	1	%	96	53	81	73
13C2-PFDoDA (surr.)	1	%	88	67	79	77
13C2-PFTeDA (surr.)	1	%	99	38	94	86
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	106	83	95	104
D3-N-MeFOSA (surr.)	1	%	61	64	31	73

Client Sample ID			0445_SW396_241204	0445E_MW052_241203	0445E_MW403_241203	0445E_MW404_241203
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0026933	M24-De0026934	M24-De0026935	M24-De0026936
Date Sampled			Dec 04, 2024	Dec 03, 2024	Dec 03, 2024	Dec 03, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D5-N-EtFOSA (surr.)	1	%	62	96	44	71
D7-N-MeFOSE (surr.)	1	%	68	43	73	99
D9-N-EtFOSE (surr.)	1	%	66	49	68	99
D5-N-EtFOSAA (surr.)	1	%	73	82	67	61
D3-N-MeFOSAA (surr.)	1	%	85	74	71	69
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.27	0.48	4.5	9.7
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	[G01]< 0.1	[G01]< 0.2
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.10	0.22	2.1	3.6
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.28	[N09]0.52	[N09]4.7	[N09]10
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]2.0	[N09]2.5	[N09]31	[N09]73
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.06	[N09]0.13	[N09]1.5	[N09]3.9
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.95	[N09]3.5	[N09]42	[N09]91
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	94	101	109	103
18O2-PFHxS (surr.)	1	%	76	126	103	100
13C8-PFOS (surr.)	1	%	86	100	106	102
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	0.58	0.10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	0.06	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	90	93	28	18
13C2-6:2 FTSA (surr.)	1	%	84	55	34	24
13C2-8:2 FTSA (surr.)	1	%	104	88	52	32
13C2-10:2 FTSA (surr.)	1	%	130	70	66	60
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	2.95	6	73	164
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	1.04	3.73	44.3	99.2
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	3.04	6.23	75.3	172.2
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	3.86	8.28	94.64	209.3
Sum of PFASs (n=30)*	0.1	ug/L	4.3	9.15	102.99	226.84

Client Sample ID			0445E_MW350S_241203	0445E_MW350D_241203	0445E_MW353_241204	0445E_MW020_241203
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0026937	M24-De0026938	M24-De0026939	M24-De0026940
Date Sampled			Dec 03, 2024	Dec 03, 2024	Dec 04, 2024	Dec 03, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	1.3	< 0.05	1.1	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	2.7	0.02	1.1	0.04
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	11	0.09	5.1	0.20
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]1.3	[N09]0.01	[N09]1.1	[N09]0.02
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]4.5	[N09]0.02	[N09]1.4	[N09]0.07
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	0.04	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	113	122	71	111
13C5-PFPeA (surr.)	1	%	114	103	142	123
13C5-PFHxA (surr.)	1	%	102	94	133	103
13C4-PFHpA (surr.)	1	%	115	116	70	109
13C8-PFOA (surr.)	1	%	97	94	127	102
13C5-PFNA (surr.)	1	%	76	99	43	97
13C6-PFDA (surr.)	1	%	52	104	56	97
13C2-PFUnDA (surr.)	1	%	83	88	38	76
13C2-PFDoDA (surr.)	1	%	86	73	63	61
13C2-PFTeDA (surr.)	1	%	128	68	38	64
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	101	105	87	106
D3-N-MeFOSA (surr.)	1	%	67	27	56	57
D5-N-EtFOSA (surr.)	1	%	72	28	60	55
D7-N-MeFOSE (surr.)	1	%	85	57	45	67
D9-N-EtFOSE (surr.)	1	%	84	53	46	67
D5-N-EtFOSAA (surr.)	1	%	64	69	73	57
D3-N-MeFOSAA (surr.)	1	%	73	75	61	67
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	2.5	0.05	[N09]5.5	0.07
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	1.1	0.02	3.0	0.03
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]3.7	[N09]0.05	[N09]6.0	[N09]0.12
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]45	[N09]0.32	[N09]31	[N09]1.7
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]2.0	[N09]0.02	[N09]1.1	[N09]0.08
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]28	[N09]0.52	[N09]12	[N09]1.6
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			0445E_MW350S_241203	0445E_MW350D_241203	0445E_MW353_241204	0445E_MW020_241203
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0026937	M24-De0026938	M24-De0026939	M24-De0026940
Date Sampled			Dec 03, 2024	Dec 03, 2024	Dec 04, 2024	Dec 03, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
13C3-PFBS (surr.)	1	%	105	102	122	88
18O2-PFHxS (surr.)	1	%	97	90	129	75
13C8-PFOS (surr.)	1	%	102	82	140	73
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	2.6	0.09	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	30	71	45	75
13C2-6:2 FTSA (surr.)	1	%	109	75	16	77
13C2-8:2 FTSA (surr.)	1	%	41	118	39	89
13C2-10:2 FTSA (surr.)	1	%	73	85	66	66
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	73	0.84	43	3.3
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	32.5	0.54	13.4	1.67
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	77.5	0.86	44.4	3.37
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	98.9	1.12	58.3	3.7
Sum of PFASs (n=30)*	0.1	ug/L	105.75	1.21	68.4	3.93

Client Sample ID			0445E_MW016_241203	0445E_MW035_241203	0445E_MW009_241203	0445E_MW043_241203
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0026941	M24-De0026942	M24-De0026943	M24-De0026944
Date Sampled			Dec 03, 2024	Dec 03, 2024	Dec 03, 2024	Dec 03, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	0.11	0.30	0.08	0.23
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.20	0.54	0.12	0.44
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	1.1	1.8	0.53	1.9
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.17	[N09]0.32	[N09]0.07	[N09]0.26
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.39	[N09]0.73	[N09]0.13	[N09]0.56
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	118	105	85	109
13C5-PFPeA (surr.)	1	%	118	99	106	105
13C5-PFHxA (surr.)	1	%	90	104	81	79
13C4-PFHpA (surr.)	1	%	103	92	101	100
13C8-PFOA (surr.)	1	%	94	73	108	81
13C5-PFNA (surr.)	1	%	101	83	73	93
13C6-PFDA (surr.)	1	%	101	73	83	89

Client Sample ID			0445E_MW016_241203	0445E_MW035_241203	0445E_MW009_241203	0445E_MW043_241203
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0026941	M24-De0026942	M24-De0026943	M24-De0026944
Date Sampled			Dec 03, 2024	Dec 03, 2024	Dec 03, 2024	Dec 03, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C2-PFUnDA (surr.)	1	%	96	68	39	81
13C2-PFDoDA (surr.)	1	%	84	58	51	64
13C2-PFTeDA (surr.)	1	%	76	49	20	60
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	131	84	65	111
D3-N-MeFOSA (surr.)	1	%	93	30	20	50
D5-N-EtFOSA (surr.)	1	%	88	33	32	49
D7-N-MeFOSE (surr.)	1	%	118	47	35	84
D9-N-EtFOSE (surr.)	1	%	112	46	32	78
D5-N-EtFOSAA (surr.)	1	%	73	55	70	60
D3-N-MeFOSAA (surr.)	1	%	80	63	59	69
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.51	1.1	0.27	0.84
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.21	0.51	0.14	0.37
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.67	[N09]0.98	[N09]0.44	[N09]1.1
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]3.9	[N09]6.6	[N09]2.0	[N09]5.8
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.29	[N09]0.63	[N09]0.18	[N09]0.46
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]6.5	[N09]7.2	[N09]3.2	[N09]8.2
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	109	88	113	95
18O2-PFHxS (surr.)	1	%	85	105	133	80
13C8-PFOS (surr.)	1	%	82	108	98	67
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	0.20	< 0.05	0.25
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	40	32	79	38
13C2-6:2 FTSA (surr.)	1	%	49	39	59	48
13C2-8:2 FTSA (surr.)	1	%	126	59	71	108
13C2-10:2 FTSA (surr.)	1	%	77	53	57	68

Client Sample ID			0445E_MW016_241203	0445E_MW035_241203	0445E_MW009_241203	0445E_MW043_241203
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0026941	M24-De0026942	M24-De0026943	M24-De0026944
Date Sampled			Dec 03, 2024	Dec 03, 2024	Dec 03, 2024	Dec 03, 2024
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	10.4	13.8	5.2	14
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	6.89	7.93	3.33	8.76
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	10.79	14.53	5.33	14.56
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	12.88	18.79	6.4	18.48
Sum of PFASs (n=30)*	0.1	ug/L	14.05	20.91	7.16	20.41

Client Sample ID			0445E_MW042_241204	0445E_MW012_241203	0445E_MW029_241203	0445N_MW346_241203
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0026945	M24-De0026946	M24-De0026947	M24-De0026948
Date Sampled			Dec 04, 2024	Dec 03, 2024	Dec 03, 2024	Dec 03, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	0.19	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.34	< 0.01	0.12	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	1.6	< 0.01	[N09]0.26	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.21	< 0.01	[N09]0.05	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.47	< 0.01	[N09]0.03	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	103	115	114	101
13C5-PFPeA (surr.)	1	%	112	135	127	110
13C5-PFHxA (surr.)	1	%	75	111	108	91
13C4-PFHpA (surr.)	1	%	99	117	115	99
13C8-PFOA (surr.)	1	%	87	111	112	95
13C5-PFNA (surr.)	1	%	94	103	104	92
13C6-PFDA (surr.)	1	%	88	103	105	100
13C2-PFUnDA (surr.)	1	%	82	87	86	79
13C2-PFDoDA (surr.)	1	%	73	83	70	66
13C2-PFTeDA (surr.)	1	%	109	166	79	52
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	108	79	88	116

Client Sample ID			0445E_MW042_241204	0445E_MW012_241203	0445E_MW029_241203	0445N_MW346_241203
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0026945	M24-De0026946	M24-De0026947	M24-De0026948
Date Sampled			Dec 04, 2024	Dec 03, 2024	Dec 03, 2024	Dec 03, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D3-N-MeFOSA (surr.)	1	%	81	6.0	17	113
D5-N-EtFOSA (surr.)	1	%	78	9.0	18	113
D7-N-MeFOSE (surr.)	1	%	81	29	45	89
D9-N-EtFOSE (surr.)	1	%	72	36	46	87
D5-N-EtFOSAA (surr.)	1	%	60	66	62	64
D3-N-MeFOSAA (surr.)	1	%	69	75	71	72
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.69	0.01	0.07	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.29	< 0.01	0.02	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.90	< 0.01	[N09]0.08	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]4.9	[N09]0.09	[N09]0.38	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.40	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]6.7	[N09]0.03	[N09]0.21	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	97	101	106	95
18O2-PFHxS (surr.)	1	%	81	88	106	101
13C8-PFOS (surr.)	1	%	69	79	94	96
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	0.17	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	58	107	99	50
13C2-6:2 FTSA (surr.)	1	%	62	101	82	60
13C2-8:2 FTSA (surr.)	1	%	90	142	101	89
13C2-10:2 FTSA (surr.)	1	%	72	99	73	69
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	11.6	0.12	0.59	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	7.17	0.03	0.24	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	12.07	0.12	0.62	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	15.27	0.13	1.12	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	16.86	0.13	1.22	< 0.1

Client Sample ID			0445N_MW345_241203	0445_MW313_241204	0445S_MW056_241204	0445_MW356_241204
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0026949	M24-De0026950	M24-De0026951	M24-De0026952
Date Sampled			Dec 03, 2024	Dec 04, 2024	Dec 04, 2024	Dec 04, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01	0.02	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.09	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.03	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.10	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	74	129	114	131
13C5-PFPeA (surr.)	1	%	97	132	129	130
13C5-PFHxA (surr.)	1	%	97	105	108	106
13C4-PFHpA (surr.)	1	%	98	114	113	117
13C8-PFOA (surr.)	1	%	103	118	115	110
13C5-PFNA (surr.)	1	%	95	121	120	105
13C6-PFDA (surr.)	1	%	92	130	124	118
13C2-PFUnDA (surr.)	1	%	72	143	121	93
13C2-PFDoDA (surr.)	1	%	61	146	121	83
13C2-PFTeDA (surr.)	1	%	65	167	182	115
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	109	97	124	107
D3-N-MeFOSA (surr.)	1	%	60	15	66	31
D5-N-EtFOSA (surr.)	1	%	58	20	69	36
D7-N-MeFOSE (surr.)	1	%	73	63	82	52
D9-N-EtFOSE (surr.)	1	%	67	66	90	55
D5-N-EtFOSAA (surr.)	1	%	51	119	91	76
D3-N-MeFOSAA (surr.)	1	%	63	119	91	84
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.03	< 0.01	0.06	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.04	< 0.01	[N09]0.09	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.21	< 0.01	[N09]0.46	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	[N09]0.03	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.03	< 0.01	[N09]1.4	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			0445N_MW345_241203	0445_MW313_241204	0445S_MW056_241204	0445_MW356_241204
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0026949	M24-De0026950	M24-De0026951	M24-De0026952
Date Sampled			Dec 03, 2024	Dec 04, 2024	Dec 04, 2024	Dec 04, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
13C3-PFBS (surr.)	1	%	98	107	107	104
18O2-PFHxS (surr.)	1	%	103	110	112	107
13C8-PFOS (surr.)	1	%	92	107	70	101
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	68	72	75	78
13C2-6:2 FTSA (surr.)	1	%	67	89	84	83
13C2-8:2 FTSA (surr.)	1	%	86	143	148	173
13C2-10:2 FTSA (surr.)	1	%	59	211	130	99
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.24	< 0.01	1.86	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.03	< 0.01	1.5	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.24	< 0.01	1.96	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.27	< 0.05	2.16	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	0.32	< 0.1	2.28	< 0.1

Client Sample ID			0445_QC101_241203	0445_QC301_241203	0445_QC401_241203	0445_QC101_241204
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0026953	M24-De0026954	M24-De0026955	M24-De0026956
Date Sampled			Dec 03, 2024	Dec 03, 2024	Dec 03, 2024	Dec 04, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	0.10	< 0.05	< 0.05	0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.18	< 0.01	< 0.01	0.10
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	[N09]0.97	< 0.01	< 0.01	[N09]0.37
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.16	< 0.01	< 0.01	[N09]0.05
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.34	< 0.01	< 0.01	[N09]0.09
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	107	132	134	68
13C5-PFPeA (surr.)	1	%	104	122	123	92
13C5-PFHxA (surr.)	1	%	82	93	94	87
13C4-PFHpA (surr.)	1	%	91	96	97	90
13C8-PFOA (surr.)	1	%	85	100	103	103
13C5-PFNA (surr.)	1	%	91	103	105	99
13C6-PFDA (surr.)	1	%	93	120	124	92

Client Sample ID			0445_QC101_241203	0445_QC301_241203	0445_QC401_241203	0445_QC101_241204
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0026953	M24-De0026954	M24-De0026955	M24-De0026956
Date Sampled			Dec 03, 2024	Dec 03, 2024	Dec 03, 2024	Dec 04, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C2-PFUnDA (surr.)	1	%	86	102	101	95
13C2-PFDoDA (surr.)	1	%	74	80	82	85
13C2-PFTeDA (surr.)	1	%	71	69	66	72
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	123	128	127	104
D3-N-MeFOSA (surr.)	1	%	84	90	84	50
D5-N-EtFOSA (surr.)	1	%	84	88	81	52
D7-N-MeFOSE (surr.)	1	%	98	112	106	60
D9-N-EtFOSE (surr.)	1	%	99	101	99	52
D5-N-EtFOSAA (surr.)	1	%	69	74	76	72
D3-N-MeFOSAA (surr.)	1	%	73	87	83	88
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.48	< 0.01	< 0.01	0.28
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.19	< 0.01	< 0.01	0.10
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.60	< 0.01	< 0.01	[N09]0.30
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]3.3	< 0.01	< 0.01	[N09]2.0
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.23	< 0.01	< 0.01	[N09]0.06
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]5.0	< 0.01	< 0.01	[N09]0.92
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	97	103	103	93
18O2-PFHxS (surr.)	1	%	73	108	110	78
13C8-PFOS (surr.)	1	%	69	103	106	86
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	37	64	66	90
13C2-6:2 FTSA (surr.)	1	%	49	71	73	87
13C2-8:2 FTSA (surr.)	1	%	105	200	186	105
13C2-10:2 FTSA (surr.)	1	%	78	101	103	132

Client Sample ID			0445_QC101_241203	0445_QC301_241203	0445_QC401_241203	0445_QC101_241204
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M24-De0026953	M24-De0026954	M24-De0026955	M24-De0026956
Date Sampled			Dec 03, 2024	Dec 03, 2024	Dec 03, 2024	Dec 04, 2024
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	8.3	< 0.01	< 0.01	2.92
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	5.34	< 0.01	< 0.01	1.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	8.64	< 0.01	< 0.01	3.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	10.53	< 0.05	< 0.05	3.86
Sum of PFASs (n=30)*	0.1	ug/L	11.55	< 0.1	< 0.1	4.32

Client Sample ID			0445_QC301_241204	0445_QC401_241204	0445_QC501_241206
Sample Matrix			Water	Water	Water
Eurofins Sample No.			M24-De0026957	M24-De0026958	M24-De0026959
Date Sampled			Dec 04, 2024	Dec 04, 2024	Dec 04, 2024
Test/Reference	LOR	Unit			
Perfluoroalkyl carboxylic acids (PFCAs)					
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 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	%	134	136	131
13C5-PFPeA (surr.)	1	%	124	124	119
13C5-PFHxA (surr.)	1	%	94	97	92
13C4-PFHpA (surr.)	1	%	96	102	94
13C8-PFOA (surr.)	1	%	100	107	100
13C5-PFNA (surr.)	1	%	97	106	99
13C6-PFDA (surr.)	1	%	106	126	116
13C2-PFUnDA (surr.)	1	%	81	101	96
13C2-PFDoDA (surr.)	1	%	61	68	74
13C2-PFTeDA (surr.)	1	%	68	41	65
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	%	97	110	123

Client Sample ID			0445_QC301_241204	0445_QC401_241204	0445_QC501_241206
Sample Matrix			Water	Water	Water
Eurofins Sample No.			M24-De0026957	M24-De0026958	M24-De0026959
Date Sampled			Dec 04, 2024	Dec 04, 2024	Dec 04, 2024
Test/Reference	LOR	Unit			
Perfluoroalkyl sulfonamido substances					
D3-N-MeFOSA (surr.)	1	%	26	20	54
D5-N-EtFOSA (surr.)	1	%	27	19	51
D7-N-MeFOSE (surr.)	1	%	54	60	94
D9-N-EtFOSE (surr.)	1	%	48	50	81
D5-N-EtFOSAA (surr.)	1	%	63	73	72
D3-N-MeFOSAA (surr.)	1	%	77	86	83
Perfluoroalkyl sulfonic acids (PFSAs)					
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	96	102	98
18O2-PFHxS (surr.)	1	%	99	108	104
13C8-PFOS (surr.)	1	%	88	101	99
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
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	%	68	70	63
13C2-6:2 FTSA (surr.)	1	%	73	79	74
13C2-8:2 FTSA (surr.)	1	%	191	174	164
13C2-10:2 FTSA (surr.)	1	%	87	98	102
PFASs Summations					
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Melbourne	Dec 17, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Dec 17, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Dec 12, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Dec 12, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Dec 11, 2024	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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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 T: +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

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Company Name: JBS & G Australia (VIC) P/L
Address: PO Box 3166
Norwood
SA 5067

Project Name: Bandiana OMP
Project ID: VIC_0445_PFASOMP_24A

Order No.:
Report #: 1169993
Phone: 03 9642 0599
Fax:

Received: Dec 11, 2024 9:37 AM
Due: Dec 18, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	0445_SW396_241204	Dec 04, 2024		Water	M24-De0026933		X
2	0445E_MW052_241203	Dec 03, 2024		Water	M24-De0026934		X
3	0445E_MW403_241203	Dec 03, 2024		Water	M24-De0026935		X
4	0445E_MW404_241203	Dec 03, 2024		Water	M24-De0026936		X
5	0445E_MW350S_241203	Dec 03, 2024		Water	M24-De0026937		X
6	0445E_MW350D_241203	Dec 03, 2024		Water	M24-De0026938		X
7	0445E_MW353_241204	Dec 04, 2024		Water	M24-De0026939		X
8	0445E_MW020_241203	Dec 03, 2024		Water	M24-De0026940		X
9	0445E_MW01	Dec 03, 2024		Water	M24-De0026941		X

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SA 5067

Project Name: Bandiana OMP
Project ID: VIC_0445_PFASOMP_24A

Order No.:
Report #: 1169993
Phone: 03 9642 0599
Fax:

Received: Dec 11, 2024 9:37 AM
Due: Dec 18, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X
	6_241203						
10	0445E_MW035_241203	Dec 03, 2024		Water	M24-De0026942		X
11	0445E_MW009_241203	Dec 03, 2024		Water	M24-De0026943		X
12	0445E_MW043_241203	Dec 03, 2024		Water	M24-De0026944		X
13	0445E_MW042_241204	Dec 04, 2024		Water	M24-De0026945		X
14	0445E_MW012_241203	Dec 03, 2024		Water	M24-De0026946		X
15	0445E_MW029_241203	Dec 03, 2024		Water	M24-De0026947		X
16	0445N_MW346_241203	Dec 03, 2024		Water	M24-De0026948		X
17	0445N_MW345_241203	Dec 03, 2024		Water	M24-De0026949		X
18	0445_MW313_241204	Dec 04, 2024		Water	M24-De0026950		X
19	0445S_MW05	Dec 04, 2024		Water	M24-De0026951		X

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Company Name: JBS & G Australia (VIC) P/L
Address: PO Box 3166
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Project Name: Bandiana OMP
Project ID: VIC_0445_PFASOMP_24A

Order No.:
Report #: 1169993
Phone: 03 9642 0599
Fax:

Received: Dec 11, 2024 9:37 AM
Due: Dec 18, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X
19	0445S_MW056_241204	Dec 04, 2024		Water	M24-De0026951		
20	0445_MW356_241204	Dec 04, 2024		Water	M24-De0026952		X
21	0445_QC101_241203	Dec 03, 2024		Water	M24-De0026953		X
22	0445_QC301_241203	Dec 03, 2024		Water	M24-De0026954		X
23	0445_QC401_241203	Dec 03, 2024		Water	M24-De0026955		X
24	0445_QC101_241204	Dec 04, 2024		Water	M24-De0026956		X
25	0445_QC301_241204	Dec 04, 2024		Water	M24-De0026957		X
26	0445_QC401_241204	Dec 04, 2024		Water	M24-De0026958		X
27	0445_QC501_241206	Dec 04, 2024		Water	M24-De0026959		X
28	0445_QC102_241203	Dec 03, 2024		Water	M24-De0026960	X	

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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: JBS & G Australia (VIC) P/L
Address: PO Box 3166
Norwood
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Project Name: Bandiana OMP
Project ID: VIC_0445_PFASOMP_24A

Order No.:
Report #: 1169993
Phone: 03 9642 0599
Fax:

Received: Dec 11, 2024 9:37 AM
Due: Dec 18, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail	HOLD*	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA # 1261 Site # 1254	X	X
Test Counts	1	27

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ppm: parts per million
µg/L: micrograms per litre
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit
Colour: Pt-Co Units (CU)

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	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	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	96			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	99			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	105			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	91			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	100			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	91			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	89			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	92			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	95			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	73			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	120			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	93			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	109			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	92			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	109			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	101			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	96			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	116			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	83			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	93			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	100			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	102			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	96			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	98			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	101			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	77			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	98			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)	%	91			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	98			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	95			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	90			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	96			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	91			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	91			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorononanoic acid (PFNA)	%	89			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	94			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	100			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	96			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	98			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	89			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	102			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	105			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	96			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	106			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	99			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	107			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	104			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	88			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	93			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	103			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	107			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	99			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	87			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	96			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	80			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	97			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	123			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	105			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	107			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	98			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	102			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	107			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	95			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	104			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	92			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	91			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	93			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	98			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	75			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	125			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	95			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	105			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	95			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	103			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	101			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	102			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	109			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	86			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	92			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	105			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	106			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	97			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	103			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	100			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	79			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	99			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	100			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	97			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	99			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	99			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	102			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	110			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	93			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	103			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	86			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	105			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	105			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	98			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	103			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	101			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	98			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	104			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	109			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	94			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	102			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	93			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	93			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	96			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	97			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	76			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	123			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	94			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	105			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	94			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	110			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	98			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	103			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	114			50-150	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	85			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	94			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	103			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	106			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	100			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	103			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	100			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	81			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	101			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)	%	97			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	99			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)	M24-De0026934	CP	%	82			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0026934	CP	%	93			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0026934	CP	%	91			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0026934	CP	%	118			50-150	Pass	
Perfluorononanoic acid (PFNA)	M24-De0026934	CP	%	90			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0026934	CP	%	89			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0026934	CP	%	92			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0026934	CP	%	93			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0026934	CP	%	65			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0026934	CP	%	107			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M24-De0026934	CP	%	93			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0026934	CP	%	101			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0026934	CP	%	92			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0026934	CP	%	105			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0026934	CP	%	96			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0026934	CP	%	102			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0026934	CP	%	112			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M24-De0026934	CP	%	62			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0026934	CP	%	92			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0026934	CP	%	91			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoropentanesulfonic acid (PFPeS)	M24-De0026934	CP	%	104			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0026934	CP	%	135			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0026934	CP	%	70			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0026934	CP	%	97			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0026934	CP	%	92			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0026934	CP	%	94			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0026934	CP	%	101			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	M24-De0026945	CP	%	101			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0026945	CP	%	121			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0026945	CP	%	101			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0026945	CP	%	116			50-150	Pass	
Perfluorononanoic acid (PFNA)	M24-De0026945	CP	%	90			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0026945	CP	%	87			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0026945	CP	%	91			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0026945	CP	%	95			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0026945	CP	%	86			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0026945	CP	%	118			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M24-De0026945	CP	%	90			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0026945	CP	%	105			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0026945	CP	%	94			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0026945	CP	%	99			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0026945	CP	%	97			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0026945	CP	%	93			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0026945	CP	%	109			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M24-De0026945	CP	%	115			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0026945	CP	%	99			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0026945	CP	%	117			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0026945	CP	%	100			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0026945	CP	%	96			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0026945	CP	%	78			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0026945	CP	%	97			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0026945	CP	%	95			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0026945	CP	%	94			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0026945	CP	%	92			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	M24-De0026955	CP	%	88			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0026955	CP	%	91			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0026955	CP	%	99			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0026955	CP	%	84			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0026955	CP	%	94			50-150	Pass	
Perfluorononanoic acid (PFNA)	M24-De0026955	CP	%	82			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0026955	CP	%	82			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0026955	CP	%	87			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0026955	CP	%	88			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0026955	CP	%	58			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0026955	CP	%	110			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M24-De0026955	CP	%	86			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0026955	CP	%	98			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0026955	CP	%	91			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0026955	CP	%	95			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0026955	CP	%	92			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0026955	CP	%	98			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0026955	CP	%	103			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M24-De0026955	CP	%	78			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0026955	CP	%	85			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0026955	CP	%	94			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0026955	CP	%	93			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorohexanesulfonic acid (PFHxS)	M24-De0026955	CP	%	87			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0026955	CP	%	91			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-De0026955	CP	%	90			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0026955	CP	%	66			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0026955	CP	%	88			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0026955	CP	%	88			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0026955	CP	%	87			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0026955	CP	%	93			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-De0026933	CP	ug/L	0.05	0.05	2.0	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0026933	CP	ug/L	0.09	0.11	20	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0026933	CP	ug/L	0.36	0.35	3.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0026933	CP	ug/L	0.05	0.04	4.0	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0026933	CP	ug/L	0.09	0.08	5.0	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-De0026933	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0026933	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0026933	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0026933	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0026933	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0026933	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-De0026933	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0026933	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0026933	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0026933	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0026933	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0026933	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0026933	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-De0026933	CP	ug/L	0.27	0.25	6.0	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0026933	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0026933	CP	ug/L	0.10	0.10	6.0	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0026933	CP	ug/L	0.28	0.27	4.0	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0026933	CP	ug/L	2.0	1.9	5.0	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0026933	CP	ug/L	0.06	0.06	7.0	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-De0026933	CP	ug/L	0.95	0.89	6.0	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0026933	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0026933	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0026933	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0026933	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0026933	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-De0026944	CP	ug/L	0.23	0.24	3.0	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0026944	CP	ug/L	0.44	0.45	2.0	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0026944	CP	ug/L	1.9	2.0	7.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0026944	CP	ug/L	0.26	0.27	3.0	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0026944	CP	ug/L	0.56	0.57	3.0	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-De0026944	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0026944	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0026944	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0026944	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0026944	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0026944	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-De0026944	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0026944	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0026944	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0026944	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0026944	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0026944	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0026944	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-De0026944	CP	ug/L	0.84	0.86	1.0	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0026944	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0026944	CP	ug/L	0.37	0.38	3.0	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0026944	CP	ug/L	1.1	1.1	4.0	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0026944	CP	ug/L	5.8	6.1	4.0	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M24-De0026944	CP	ug/L	0.46	0.47	3.0	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-De0026944	CP	ug/L	8.2	8.2	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0026944	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0026944	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0026944	CP	ug/L	0.25	0.25	1.0	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0026944	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0026944	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M24-De0026953	CP	ug/L	0.10	0.11	3.0	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M24-De0026953	CP	ug/L	0.18	0.19	4.0	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M24-De0026953	CP	ug/L	0.97	1.0	5.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M24-De0026953	CP	ug/L	0.16	0.16	3.0	30%	Pass	
Perfluorooctanoic acid (PFOA)	M24-De0026953	CP	ug/L	0.34	0.35	3.0	30%	Pass	
Perfluorononanoic acid (PFNA)	M24-De0026953	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M24-De0026953	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M24-De0026953	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M24-De0026953	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M24-De0026953	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M24-De0026953	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M24-De0026953	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M24-De0026953	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M24-De0026953	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M24-De0026953	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M24-De0026953	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M24-De0026953	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M24-De0026953	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M24-De0026953	CP	ug/L	0.48	0.50	4.0	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M24-De0026953	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M24-De0026953	CP	ug/L	0.19	0.20	5.0	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M24-De0026953	CP	ug/L	0.60	0.60	1.0	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M24-De0026953	CP	ug/L	3.3	3.4	3.0	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M24-De0026953	CP	ug/L	5.0	5.7	12	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M24-De0026953	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M24-De0026953	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M24-De0026953	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M24-De0026953	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M24-De0026953	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Report 1169993-W-V2 (amendment to report 1169993-W) has been issued with revised results for Pfas on all requested samples, following repeat analysis.

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
G01	The LORs have been raised due to matrix interference
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:



Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Chain of Custody

5

JBS&

PROJECT NO.: VIC_0445_PFASOMP_24A	LABORATORY BATCH NO.:
PROJECT NAME: Bandiana PFAS OMP	SAMPLERS: [redacted]
DATE NEEDED BY: Standard TAT	QC LEVEL: NEPM (2013)

PHONE: Sydney 02 8245 0300 | Perth 08 9488 0100 | Brisbane 07 3211 5350 | Melbourne 03 9642 0599 | Adelaide 08 8431 7113

SEND REPORT & INVOICE TO: (1) jscott@jbsg.com.au; (2) ehellawell@jbsg.com.au; (3) tdufty@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Please forward all samples along with this COC to Envirolab

	SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	PFAS (28)		HOLD															TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
1	0445_QC201_241203	Water	03/12/24		1 PFAS bottle		X																			
2	0445_QC202_241203	Water	03/12/24		1 PFAS bottle				X																	
3	0445_QC201_241204	Water	04/12/24		1 PFAS bottle		X																			

Envirolab Services
ENVIROLAB
Croydon South VIC 3136
Ph: (03) 9763 2500
Job No: MELO2698
Date Received: 12/12/24
Time Received: 12:50
Received By: GS
Temp: Cooled/Ambient 9.3
Cooling: Ice/Icepack
Security: Intact/Broken/None

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
[redacted]	CONSIGNMENT NOTE NO. TRANSPORT CO.	NAME: GS DATE: 12/12/24 OF: GS	COOLER SEAL – Yes..... No ..... Intact ..... Broken COOLER TEMP ..... deg C
	CONSIGNMENT NOTE NO. TRANSPORT CO	NAME: DATE: OF:	COOLER SEAL – Yes..... No ..... Intact ..... Broken COOLER TEMP ..... deg C

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O =

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Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph +61 3 9763 2500
melbourne@envirolab.com.au
www.envirolab.com.au

Sample Receipt Advice MFL0268

Client Details

Client	JBS & G Australia Pty Ltd (Melbourne)
Attention	[redacted]

Sample Login Details

Your Reference	VIC_0445_PFASOMP_24A
Envirolab Reference	MFL026/
Date Sample Received	12Y12Y2024
Date Instructions Received	12Y12Y2024
Date Final Results Expected	19Y12Y2024

Sample Condition

Samples received in appropriate condition for analysis	Wes
Number of Samples	3 ° ater
Turnaround Time	5 Days
Temperatures / Cooling Methods	9.3kC Ice Pacg

Additional Info

Sample stora- e x waters are routinely disposed at approf imately 1 month and soils approf imately 2 months qrom receipt.

Re, uests qpr lon- er term sample stora- e must be received in writin- .

° here no samplin- date has been supplied qpr some or all samplesTthe date oqsample receipt has been used as the associated samplin- date. Hhe samplin- dates are used to assess compliance to recommended Hechnical Eoldin- Himes.

Please contact the laboratory immediately iqobserved settled sediment present in water samples is to be included in the ef traction andYor analysis (ef ceptions include certain Physical Hests (pEY: CYBODYCODYApparent Colour etc.)TSolids testin- T Hotal Recoverable metals and PFAS analysis where solids are included by deqault).

Please direct any , ueries to•

[redacted]

Phone 03 9763 2500
Email [redacted]u

[redacted]

Phone 03 9763 2500
Email [redacted]

Analysis underway, details on the following page

Sample Receipt Advice MFL0268

Analysis Grid

Hhe | indicates the testin- you have re, uested. ***THIS IS NOT A REPORT OF THE RESULTS.***

	PFAS x : f tended (LL)	On Eold
MFL026/ x01 ° ater Q03Y12Y2024 0445_8 C201_241203	•	
MFL026/ x02 ° ater Q03Y12Y2024 0445_8 C202_241203		•
MFL026/ x03 ° ater Q04Y12Y2024 0445_8 C201_241204	•	

Suite Details

Suite Name	Suite Analyses
PFAS - Extended (LL) | Water	PFAS : XH LL xISHDTPFASx: f tended (LL)

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph +61 3 9763 2500
melbourne@envirolab.com.au
www.envirolab.com.au

Certificate of Analysis MFL0268

Client Details

Client	JBS & G Australia Pty Ltd (Melbourne)
Contact	[redacted]
Address	19/31 Queen St, MELBOURNE, VIC, 3000

Sample Details

Your Reference	VIC_0445_PFASOMP_24A
Number of Samples	3 Water
Date Samples Received	12/12/2024
Date Instructions Received	12/12/2024

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for soils and on an as received basis for other matrices.

Report Details

Date Results Requested by	19/12/2024
Date of Issue	19/12/2024

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Accredited for compliance with ISO/IEC 17025. Tests not covered by NATA are denoted with *.

Authorisation Details

Results Approved By	[redacted] Senior Chemist
Laboratory Manager	[redacted]

Certificate of Analysis MFL0268

Samples in this Report

Envirolab ID	Sample ID	Matrix	Date Sampled	Date Received
MFL0268-01	0445_QC201_241203	Water	03/12/2024	12/12/2024
MFL0268-02	0445_QC202_241203	Water	03/12/2024	12/12/2024
MFL0268-03	0445_QC201_241204	Water	04/12/2024	12/12/2024

Certificate of Analysis MFL0268

PFAS Extended List (Low Level) (Water) - Analysed By Envirolab Services Sydney

Envirolab ID	Units	PQL	MFL0268-01	MFL0268-03
Your Reference			0445_QC201_241203	0445_QC201_241204
Date Sampled			03/12/2024	04/12/2024
Perfluorobutanesulfonic acid (PFBS)	µg/L	0.010	0.37	0.30
Perfluoropentanesulfonic acid (PFPeS)	µg/L	0.010	0.30	0.27
Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.010	2.2	1.9
Perfluoroheptanesulfonic acid (PFHpS)	µg/L	0.010	0.18	0.069
Perfluorooctanesulfonic acid (PFOS)	µg/L	0.010	2.5	0.71
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.010	<0.010	<0.010
Perfluorobutanoic acid (PFBA)	µg/L	0.050	<0.050	<0.050
Perfluoropentanoic acid (PFPeA)	µg/L	0.010	0.11	0.090
Perfluorohexanoic acid (PFHxA)	µg/L	0.010	0.56	0.31
Perfluoroheptanoic acid (PFHpA)	µg/L	0.010	0.10	0.046
Perfluorooctanoic acid (PFOA)	µg/L	0.010	0.16	0.093
Perfluorononanoic acid (PFNA)	µg/L	0.010	<0.010	<0.010
Perfluorodecanoic acid (PFDA)	µg/L	0.010	<0.010	<0.010
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.010	<0.010	<0.010
Perfluorododecanoic acid (PFDoDA)	µg/L	0.010	<0.010	<0.010
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.010	<0.010	<0.010
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.050	<0.050	<0.050
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.010	<0.010	<0.010
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.050	<0.050	<0.050
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.010	<0.010	<0.010
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.010	<0.010	<0.010
Perfluorooctane sulfonamide (FOSA)	µg/L	0.050	<0.050	<0.050
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.050	<0.050	<0.050
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.10	<0.10	<0.10
N-Methyl perfluorooctane sulfonamidoethanol	µg/L	0.050	<0.050	<0.050
N-Ethyl perfluorooctane sulfonamidoethanol	µg/L	0.50	<0.50	<0.50
N-Methyl perfluorooctane sulfonamidoacetic acid	µg/L	0.050	<0.050	<0.050
N-Ethyl perfluorooctane sulfonamidoacetic acid	µg/L	0.050	<0.050	<0.050
Surrogate 13C8 PFOS	%		*## [1]*	*113*
Surrogate 13C2 PFOA	%		*124*	*126*
Extraction Internal Standard 13C3 PFBS	%		*96.0*	*102*
Extraction Internal Standard 18O2 PFHxS	%		*102*	*101*
Extraction Internal Standard 13C4 PFOS	%		*98.0*	*96.0*
Extraction Internal Standard 13C4 PFBA	%		*92.0*	*56.0*
Extraction Internal Standard 13C3 PFPeA	%		*118*	*23.0 [2]*
Extraction Internal Standard 13C2 PFHxA	%		*100*	*92.0*
Extraction Internal Standard 13C4 PFHpA	%		*42.0 [2]*	*35.0 [2]*
Extraction Internal Standard 13C4 PFOA	%		*92.0*	*49.0 [2]*
Extraction Internal Standard 13C5 PFNA	%		*45.0 [2]*	*61.0*
Extraction Internal Standard 13C2 PFDA	%		*100*	*73.0*
Extraction Internal Standard 13C2 PFUnDA	%		*101*	*71.0*
Extraction Internal Standard 13C2 PFDoDA	%		*86.0*	*72.0*

PFAS Extended List (Low Level) (Water) - Analysed By Envirolab Services Sydney

Envirolab ID	Units	PQL	MFL0268-01	MFL0268-03
Your Reference			0445_QC201_241203	0445_QC201_241204
Date Sampled			03/12/2024	04/12/2024
Extraction Internal Standard 13C2 PFTeDA	%		*69.0*	*57.0*
Extraction Internal Standard 13C2 4:2FTS	%		*102*	*125*
Extraction Internal Standard 13C2 6:2FTS	%		*149*	*93.0*
Extraction Internal Standard 13C2 8:2FTS	%		*139*	*124*
Extraction Internal Standard 13C8 FOSA	%		*112*	*111*
Extraction Internal Standard d3 N MeFOSA	%		*103*	*101*
Extraction Internal Standard d5 N EtFOSA	%		*104*	*102*
Extraction Internal Standard d7 N MeFOSE	%		*106*	*107*
Extraction Internal Standard d9 N EtFOSE	%		*92.0*	*87.0*
Extraction Internal Standard d3 N MeFOSAA	%		*158 [2]*	*113*
Extraction Internal Standard d5 N EtFOSAA	%		*129*	*99.0*

Result Comments

Identifier	Description
[1]	Spike recovery is not applicable due to the relatively high analyte background in the sample (>3* spike level). However, the LCS recovery is within acceptance criteria.
[2]	For PFAS Extracted Internal Standards denoted with ## or being outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

Method Summary

Method ID	Methodology Summary
ORG-029	Soil/solid and sorbent samples are extracted with basified Methanol. Waters and soil/sorbent extracts are directly injected and/or concentrated/extracted using SPE. TCLP/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MSMS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

Result Definitions

Identifier	Description
NR	Not reported
NEPM	National Environment Protection Measure
NS	Not specified
LCS	Laboratory Control Sample
RPD	Relative Percent Difference
>	Greater than
<	Less than
PQL	Practical Quantitation Limit
INS	Insufficient sample for this test
NA	Test not required
NT	Not tested
DOL	Samples rejected due to particulate overload (air filters only)
RFD	Samples rejected due to filter damage (air filters only)
RUD	Samples rejected due to uneven deposition (air filters only)
##	Indicates a laboratory acceptance criteria outlier, for further details, see Result Comments and/or QC Comments

Quality Control Definitions

Blank

This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, and is determined by processing solvents and reagents in exactly the same manner as for samples.

Surrogate Spike

Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

LCS (Laboratory Control Sample)

This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Matrix Spike

A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

Duplicate

This is the complete duplicate analysis of a sample from the process batch. The sample selected should be one where the analyte concentration is easily measurable.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria. Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction. Spikes for Physical and Aggregate Tests are not applicable. For VOCs in water samples, three vials are required for duplicate or spike analysis.

General Acceptance Criteria (GAC) - Analyte specific criteria applies for some analytes and is reflected in QC recovery tables.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% - see ELN-P05 QAQC tables for details (available on request); <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase. Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was typically insufficient in order to satisfy laboratory QA/QC protocols.

Miscellaneous Information

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached. We have taken the sampling date as being the date received at the laboratory.

Two significant figures are reported for the majority of tests and with a high degree of confidence, for results <10*PQL, the second significant figure may be in doubt i.e. has a relatively high degree of uncertainty and is provided for information only.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS where sediment/solids are included by default.

Urine Analysis - The BEI values listed are taken from the 2022 edition of *TLVs and BEIs Threshold Limits by ACGIH*.

Air volume measurements are not covered by Envirolab's NATA accreditation.

Data Quality Assessment Summary MFL0268

Client Details

Client	JBS & G Australia Pty Ltd (Melbourne)
Your Reference	VIC_0445_PFASOMP_24A
Date Issued	19/12/2024

Recommended Holding Time Compliance

No recommended holding time exceedances

Quality Control and QC Frequency

QC Type	Compliant	Details
Blank	Yes	No Outliers
LCS	Yes	No Outliers
Duplicates	Yes	No Outliers
Matrix Spike	Yes	No Outliers
Surrogates / Extracted Internal Standards	No	Surrogates / Extracted ISTD Outliers Exist - See detailed list below
QC Frequency	No	QC Frequency Outliers Exist - See detailed list below

Surrogates/Extracted Internal Standards, Duplicates and/or Matrix Spikes are not always relevant/applicable to certain analyses and matrices. Therefore, said QC measures are deemed compliant in these situations by default. See Laboratory Acceptance Criteria for more information

Data Quality Assessment Summary MFL0268

Recommended Holding Time Compliance

Analysis	Sample Number(s)	Date Sampled	Date Extracted	Date Analysed	Compliant
PFAS EXT LL -ISTD | Water	1	03/12/2024	19/12/2024	19/12/2024	Yes
	3	04/12/2024	19/12/2024	19/12/2024	Yes
PFAS-Extended (LL) | Water	1	03/12/2024	19/12/2024	19/12/2024	Yes
	3	04/12/2024	19/12/2024	19/12/2024	Yes

Outliers: Surrogate / Extracted Internal Standards

ORG-029|PFAS Extended List (Low Level) (Matrix)| Batch BFL3661

Sample ID	Analyte	% Limits	% Recovery
MFL0268-01	Extraction Internal Standard d3 N MeFOSAA	50 - 150	158 [2]
	Extraction Internal Standard 13C5 PFNA	50 - 150	45.0 [2]
	Extraction Internal Standard 13C4 PFHpA	50 - 150	42.0 [2]
	13C8 PFOS	50 150	## [1]
MFL0268-03	Extraction Internal Standard 13C4 PFOA	50 - 150	49.0 [2]
	Extraction Internal Standard 13C4 PFHpA	50 - 150	35.0 [2]
	Extraction Internal Standard 13C3 PFPeA	50 - 150	23.0 [2]

Outliers: QC Frequency

ORG-029|PFAS Extended List (Low Level) (Water)| Batch BFL3661

Analysis	QC Type	Expected	Reported
PFAS EXT LL -ISTD	Duplicate	1	0
	Matrix Spike	1	0
PFAS-Extended (LL)	Duplicate	1	0
	Matrix Spike	1	0

Quality Control MFL0268

ORG-029|PFAS Extended List (Low Level) (Water) | Batch BFL3661

Analyte	Units	PQL	Blank	LCS %
Perfluorobutanesulfonic acid (PFBS)	µg/L	0.010	<0.010	106
Perfluoropentanesulfonic acid (PFPeS)	µg/L	0.010	<0.010	105
Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.010	<0.010	103
Perfluoroheptanesulfonic acid (PFHpS)	µg/L	0.010	<0.010	106
Perfluorooctanesulfonic acid (PFOS)	µg/L	0.010	<0.010	104
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.010	<0.010	104
Perfluorobutanoic acid (PFBA)	µg/L	0.050	<0.050	102
Perfluoropentanoic acid (PFPeA)	µg/L	0.010	<0.010	109
Perfluorohexanoic acid (PFHxA)	µg/L	0.010	<0.010	102
Perfluoroheptanoic acid (PFHpA)	µg/L	0.010	<0.010	103
Perfluorooctanoic acid (PFOA)	µg/L	0.010	<0.010	104
Perfluorononanoic acid (PFNA)	µg/L	0.010	<0.010	101
Perfluorodecanoic acid (PFDA)	µg/L	0.010	<0.010	103
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.010	<0.010	94.2
Perfluorododecanoic acid (PFDoDA)	µg/L	0.010	<0.010	103
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.010	<0.010	104
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.050	<0.050	99.0
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.010	<0.010	103
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.050	<0.050	102
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.010	<0.010	94.4
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.010	<0.010	128
Perfluorooctane sulfonamide (FOSA)	µg/L	0.050	<0.050	98.1
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.050	<0.050	102
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.10	<0.10	95.6
N-Methyl perfluorooctane sulfonamidoethanol	µg/L	0.050	<0.050	95.1
N-Ethyl perfluorooctane sulfonamidoethanol	µg/L	0.50	<0.50	101
N-Methyl perfluorooctane sulfonamidoacetic acid	µg/L	0.050	<0.050	102
N-Ethyl perfluorooctane sulfonamidoacetic acid	µg/L	0.050	<0.050	109
Surrogate 13C8 PFOS	*%*		*102*	*99.2*
Surrogate 13C2 PFOA	*%*		*97.9*	*101*
Extraction Internal Standard 13C3 PFBS	*%*		*72.0*	*[NA]*
Extraction Internal Standard 18O2 PFHxS	*%*		*78.0*	*[NA]*
Extraction Internal Standard 13C4 PFOS	*%*		*77.0*	*[NA]*
Extraction Internal Standard 13C4 PFBA	*%*		*78.0*	*[NA]*
Extraction Internal Standard 13C3 PFPeA	*%*		*73.0*	*[NA]*
Extraction Internal Standard 13C2 PFHxA	*%*		*79.0*	*[NA]*
Extraction Internal Standard 13C4 PFHpA	*%*		*78.0*	*[NA]*
Extraction Internal Standard 13C4 PFOA	*%*		*79.0*	*[NA]*
Extraction Internal Standard 13C5 PFNA	*%*		*78.0*	*[NA]*
Extraction Internal Standard 13C2 PFDA	*%*		*74.0*	*[NA]*
Extraction Internal Standard 13C2 PFUnDA	*%*		*84.0*	*[NA]*
Extraction Internal Standard 13C2 PFDoDA	*%*		*85.0*	*[NA]*
Extraction Internal Standard 13C2 PFTeDA	*%*		*86.0*	*[NA]*
Extraction Internal Standard 13C2 4:2FTS	*%*		*72.0*	*[NA]*
Extraction Internal Standard 13C2 6:2FTS	*%*		*77.0*	*[NA]*
Extraction Internal Standard 13C2 8:2FTS	*%*		*78.0*	*[NA]*
Extraction Internal Standard 13C8 FOSA	*%*		*78.0*	*[NA]*
Extraction Internal Standard d3 N MeFOSA	*%*		*109*	*[NA]*
Extraction Internal Standard d5 N EtFOSA	*%*		*102*	*[NA]*
Extraction Internal Standard d7 N MeFOSE	*%*		*108*	*[NA]*
Extraction Internal Standard d9 N EtFOSE	*%*		*91.0*	*[NA]*
Extraction Internal Standard d3 N MeFOSAA	*%*		*94.0*	*[NA]*
Extraction Internal Standard d5 N EtFOSAA	*%*		*93.0*	*[NA]*

Appendix G MW357 Survey Results

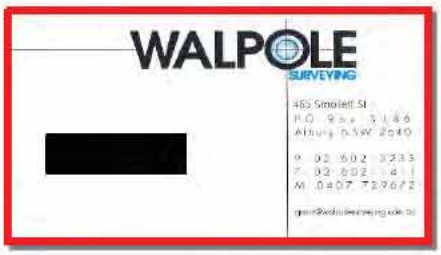
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Bandiana Monitoring Wells - Results of Survey delivery

Walpole Surveying Reference: 22082, Date of survey: 31-01-2025

Coordinate Datum: MGA2020 Level Datum: AHD

Well ID	Easting (m)	Northing (m)	TOC Level (m)	Ground Level (m)
MW357	495794.182	6001683.580	156.247	155.466



Appendix H Water Quality Parameter Descriptions

Descriptions of the water quality parameter ranges for EC, pH, DO and ORP have been summarised below.

Table H.1: Water Quality Parameter Descriptions

Parameter	Description	Reference or Comment
EC	Freshwater: 0–2,500 µS/cm Brackish Water: 2,500–5,000 µS/cm Saline Water: 5,000–50,000 µS/cm Seawater: 50,000 µS/cm	Based on general guidance discussed in Australian and New Zealand Environment and Conservation Council (ANZECC) and Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) Water Quality Guidelines (ANZECC and ARMCANZ 2000).
pH	Acidic: <6.5 Neutral: 6.5–8.5 Alkaline: >8.5	No single international standard, but commonly used ranges from groundwater and wastewater treatment sources.
DO	Hypoxic: <2 mg/L Poor aerobic: 2–5 mg/L Good aerobic: 5–8 mg/L Excellent aerobic: >8 mg/L	Based on Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG 2018) and World Health Organisation Guidelines for Drinking-Water Quality (WHO 2022) water quality standards.
ORP	Anaerobic: <0 mV Moderately Reducing: 0–200 mV Oxidising: 200–400 mV Highly Oxidising: >400 mV	No single international standard, but commonly used ranges from groundwater and wastewater treatment sources.

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Appendix F Summary of Sample Event Variation from OMP SAQP



Tables have been provided on the following pages detailing the sample event variations from the OMP SAQPs (Stantec 2024a and JBS&G 2024c), as summarised from the consultant's SERs (see **Appendix D** and **Appendix E**). JBS&G commentary has been provided where relevant. Variations relating to groundwater have been provided in **Table F.1**, surface water in **Table F.2** and sediment in **Table F.3**.

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Table F.1: Deviations from OMP SAQP – Groundwater

Location	Deviation	Comments	Impact on Existing Dataset & Program
Sampling Event 6 – April 2024			
MW303	Additional non-OMP location sampled in standalone event.	Well sampled to provide additional data to assess PFAS plume extents.	Sampling location provides delineation information for PFAS plume from Source Area 1 into the off-base areas, north east of South Bandiana. This was an opportune sample collection and is not part of the standard OMP, as such, results from this location have not been discussed in the OMR.
MW305	Additional non-OMP location sampled in standalone event.	Well sampled to provide additional data to assess PFAS plume extents.	Sampling location provides delineation information for PFAS plume in the down hydraulic gradient portion of Source Area 1 in South Bandiana. This was an opportune sample collection and is not part of the standard OMP, as such, results from this location have not been discussed in the OMR.
MW403	Not gauged during initial gauging round.	Well could not be accessed during initial gauging period owing to parked vehicle.	Minor impact – nearby wells (MW404, MW350_S and MW350_D) were able to be gauged during the initial gauging round. Subsequently gauged during sampling. Furthermore, the aquifers identified across the Management Area are not known to be influenced over the short term by rainfall or other factors.
MW411	Additional non-OMP location sampled in standalone event.	Well sampled to provide additional data to assess PFAS plume extents.	Sampling location provides delineation information for PFAS plume in off-base areas to the northeast of East Bandiana. This was an opportune sample collection and is not part of the standard OMP, as such, results from this location have not been discussed in the OMR.
MW412	Additional non-OMP location sampled in standalone event.	Well sampled to provide additional data to assess PFAS plume extents.	Sampling location provides delineation information for PFAS plume in off-base areas to the northeast of East Bandiana. This was an opportune sample collection and is not part of the standard OMP, as such, results from this location have not been discussed in the OMR.
MW413	Additional non-OMP location sampled in standalone event.	Well sampled to provide additional data to assess PFAS plume extents.	Sampling location provides delineation information for PFAS plume in off-base areas to the northeast of East Bandiana. This was an opportune sample collection and is not part of the standard OMP, as such, results from this location have not been discussed in the OMR.
MW415	Additional non-OMP location sampled in standalone event.	Well sampled to provide additional data to assess PFAS plume extents.	Sampling location provides delineation information for PFAS plume in off-base areas to the northeast of East Bandiana. This was an opportune sample collection and is not part of the standard OMP, as such, results from this location have not been discussed in the OMR.
Sampling Event 7 – November/December 2024			
MW018	Sampled slightly earlier than the required 24-hour	-	Low impact – Deployment time was slightly less than 24 hours, sampled at just over 23 hours. Results obtained during the sample event were comparable with historic results. The time difference is therefore not considered to influence the results.

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Location	Deviation	Comments	Impact on Existing Dataset & Program
	HydraSleeve™ deployment time.		
MW056	Sampled slightly earlier than the required 24-hour HydraSleeve™ deployment time.	-	Low impact – Deployment time was slightly less than 24 hours, sampled at just over 23 hours. Results obtained during the sample event were comparable with historic results. The time difference is therefore not considered to influence the results.
MW313	Sampled slightly earlier than the required 24-hour HydraSleeve™ deployment time.	-	Low impact – Deployment time was slightly less than 24 hours, sampled at just over 23 hours. Results obtained during the sample event were comparable with historic results. The time difference is therefore not considered to influence the results.
MW317	Sampled with bailer instead of HydraSleeve™.	This occurred owing to miscommunication with the field staff.	Low impact – MW317 is located within Source Area 2 and its concentrations, along with immediately surrounding wells, have had low PFAS concentrations. Similar concentrations were identified during the November/December 2024 event, as has historically been identified in the Source Area. Based on this, it is considered unlikely that the use of a bailer to sample instead of HydraSleeve™ has materially influenced the results.
MW318	Not Sampled.	Bore dry.	Low impact – MW315 and MW317 were both able to be sampled during the November/December 2024 sampling event. Both these wells target the same Source Area as MW318 and are screened within the same aquifer. Based on historic data, MW318 has frequently been identified as dry, and has not been sampled in seven OMP sampling events.
MW354	Sampled slightly earlier than the required 24-hour HydraSleeve™ deployment time.	-	Low impact – Deployment time was less than 24-hours, however over 23 hours. Results obtained during the sample event were comparable with historic results. The time difference is therefore not considered to influence the results.
OTH019, MW351 and MW352	Analysed for PFAS at a trace level.	-	The three locations represent groundwater conditions which are either leaving the base into residential areas where groundwater bores are a possibility or from 'point of use' groundwater bores. The lower analysis was adopted for this sampling event in response to National Health and Medical Research Council (NHRMC) releasing draft health-based drinking water guideline values which propose lower PFAS criteria than is currently adopted. The trace level allow Defence to made risk-based decision in regard to management of groundwater concentrations.

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Location	Deviation	Comments	Impact on Existing Dataset & Program
All wells	A single gauging round at the start of the event was not completed.	Field team re-prioritising surface water sampling (significant rainfall occurred early during the sampling period) rather than groundwater well gauging and HydraSleeve™ deployment. Several wells were also disidentified during the first week of sampling, resulting in these wells being gauged during the second week.	The aquifers identified across the Management Area are not known to be influenced over the short term by rainfall or other factors. Observations indicate that the hydrogeological parameters, including SWL measured in individual wells and the overall groundwater flow direction, remain consistent with historical data from previous sampling undertaken. This consistency suggests that the aquifers operate under longer-term hydraulic regimes, where recharge and discharge processes are governed more by sustained, rather than more immediate rainfall events.

Table F.2: Deviations From OMP SAQP – Surface Water

Location	Deviation	Comments	Impact on Existing Dataset & Program
Sampling Event 6 – April 2024			
SW302	Not sampled.	Location dry.	No impact – Monitoring throughout the OMP program and DSI (Golder 2018) indicates this location is consistently dry and had not been sampled up to the point of this sampling event. It is therefore not considered to affect the dataset. Downstream location off-base (SW427) was sampled during the E6 sampling event and previous events.
SW307	Not sampled.	Location dry.	Low impact – Monitoring throughout the OMP program indicates this location is ephemeral and usually dry, except following a reasonable rainfall event. Therefore, this is considered to have a low impact on the dataset. Downstream locations off-base (SW424, SW427) were sampled during the E6 sampling event. SW307 was last sampled in October 2022 and reported results above the adopted drinking water criterion for sum of PFOS+PFHxS.
SW310	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of E6 sampling event in April 2024.	Low impact – Location was dry during the E6 sampling event. Location was sampled subsequently on 31 May 2024 following a rain event. Monitoring throughout the OMP program indicates this location is ephemeral and usually dry, except following a reasonable rainfall event. This is considered to have minimal impact on the dataset as the location was sampled during a second visit and the concentrations were consistent with historical results.
SW311	Sampled in standalone event following	Location was dry at the time of E6 sampling event in April 2024.	Low impact – Location was dry during the E6 sampling event. Location was sampled subsequently on 31 May 2024 following a rain event. Monitoring throughout the OMP program indicates this location is ephemeral and usually dry, except following

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Location	Deviation	Comments	Impact on Existing Dataset & Program
	completion of E6 OMP event.		a reasonable rainfall event. This is considered to have minimal impact on the dataset as the location was sampled during a second visit and the concentrations were consistent with historical results.
SW313	Not sampled.	Location dry.	Low impact – Monitoring throughout the OMP program indicates this location is ephemeral and usually dry, except following a reasonable rainfall event. Therefore, this is considered to have a low impact on the dataset. Downstream location off-base (SW427) was sampled during this event. Location last sampled in October 2023 and reported results above the adopted drinking water criterion for sum of PFOS+PFHxS.
SW316	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of E6 sampling event in April 2024.	Low impact – Location was dry during the E6 sampling event. Location was sampled subsequently on 31 May 2024 following a rain event. Monitoring throughout the OMP program indicates this location is ephemeral and usually dry, except following a reasonable rainfall event. This is considered to have minimal impact on the dataset as the location was sampled during a second visit and the concentrations were consistent with historical results.
SW321	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of E6 sampling event in April 2024.	Low impact – Location was dry during the E6 sampling event. Location was sampled subsequently on 31 May 2024 following a rain event. This was the first time throughout the OMP that this location was dry and is considered to have a low impact on the dataset as the location was sampled during the second visit and the concentrations were consistent with historical results.
SW322	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of E6 sampling event in April 2024.	Low impact – Location was dry during the E6 sampling event. Location was sampled subsequently on 31 May 2024 following a rain event. This was the first time throughout the OMP that this location was dry and is considered to have a low impact on the dataset as the location was sampled during the second visit and the concentrations were consistent with historical results.
SW323	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of E6 sampling event in April 2024.	Low impact – Location was dry during the E6 sampling event. Location was sampled subsequently on 31 May 2024 following a rain event. This was the first time throughout the OMP that this location was dry and is considered to have a low impact on the dataset as the location was sampled during the second visit and the concentrations were consistent with historical results.
SW332	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of E6 sampling event in April 2024.	Low impact – Location was dry during the E6 sampling event. Location was sampled subsequently on 31 May 2024 following a rain event. Monitoring throughout the OMP program indicates this location is ephemeral and usually dry, except following a reasonable rainfall event. This is considered to have minimal impact on the dataset as the location was sampled during a second visit and the concentrations were consistent with historical results.

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Location	Deviation	Comments	Impact on Existing Dataset & Program
SW333	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of E6 sampling event in April 2024.	Low impact – Location was dry during the E6 sampling event. Location was sampled subsequently on 31 May 2024 following a rain event. It is noted that this location was also dry during October 2023 but was sampled in a subsequent visit following rainfall in November 2023. It is considered to have a low impact on the dataset as the location was sampled during a second visit and the concentrations were consistent with historical results.
SW336	Not sampled.	Unable to access.	Low impact – Location was unable to be accessed, and no downstream locations were sampled during this event. This is considered to have a low impact on the dataset as location was last sampled in October 2023 where results were reported above the adopted drinking water criterion for sum of PFOS+PFHxS.
SW340	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of E6 sampling event in April 2024.	Low impact – Location was dry during the E6 sampling event. Location was sampled subsequently on 31 May 2024 following a rain event. Monitoring throughout the OMP program indicates this location is ephemeral and usually dry, except following a reasonable rainfall event. This is considered to have minimal impact on the dataset as the location was sampled during a second visit and the concentrations were consistent with historical results.
SW370	Not sampled.	Location dry.	Low impact – This was the first time during the OMP program that this location was dry and is considered to have a low impact on the dataset. Downstream on-base locations (SW374 and SW375) were sampling during this event. This location was last sampled during October 2023 and reported results above the adopted drinking water criterion for sum of PFOS+PFHxS.
SW379	Not sampled.	Location dry.	Low impact – Monitoring throughout the OMP program indicates this location is ephemeral and usually dry, except following a reasonable rainfall event. This is considered to have minimal impact on the dataset. Downstream on-base location (SW382) was sampled during this event. This location was last sampled during October 2022 and reported results above the adopted drinking water criterion for sum of PFOS+PFHxS.
SW380	Not sampled.	Location dry.	Low impact – Monitoring throughout the OMP program indicates this location is ephemeral and usually dry, except following a reasonable rainfall event. This is considered to have minimal impact on the dataset. Downstream on-base location (SW382) was sampled during this event. This location was last sampled during May 2023 and reported results above the adopted drinking water criterion for sum of PFOS+PFHxS.
SW388	Not sampled.	Location dry.	Low impact – Monitoring throughout the OMP program indicates this location is ephemeral and usually dry, except following a reasonable rainfall event. This is considered to have minimal impact on the dataset. Downstream off-base location

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Location	Deviation	Comments	Impact on Existing Dataset & Program
			(SW398) was sampled during this event. This location was last sampled during October 2022 and reported results above the adopted drinking water criterion for sum of PFOS+PFHxS.
SW396	Not sampled.	Location dry.	Low impact – This was the first time during the OMP program that this location was dry, and is considered to have a low impact on the dataset. Other locations monitoring the Kiewa River floodplain oxbows (SW395, SW397 and SW487) and downstream off-base locations (SW398 and SW404) were sampled during this event. This location was last sampled during October 2023 and reported results above the adopted drinking water criterion for sum of PFOS+PFHxS.
SW401	Not sampled.	Location dry.	Low impact – This was the first time during the OMP program that this location was dry, and is considered to have a low impact on the dataset. Downstream off-base location (SW404) was sampled during this event. This location was last sampled in October 2023 and reported results above the adopted drinking water criterion for sum of PFOS+PFHxS.
SW403	Not sampled.	Location dry.	Low impact – This was the first time during the OMP program that this location was dry, and is considered to have a low impact on the dataset. Downstream off-base location (SW404) was sampled during this event. This location was last sampled in October 2023 and reported results above the adopted drinking water criterion for sum of PFOS+PFHxS.
SW405	Not sampled.	Location dry.	Low impact – This was the first time during the OMP program that this location was dry, and is considered to have a low impact on the dataset. Downstream off-base location (SW416) was sampled during this event. This location was last sampled in October 2023 and reported results above the adopted drinking water criterion for sum of PFOS+PFHxS.
SW462	Sampled in standalone event following completion of E6 OMP event.	Location was dry at the time of E6 sampling event in April 2024.	Low impact – Location was dry during the E6 sampling event. Location was sampled subsequently on 31 May 2024 following a rain event. This was the first time throughout the OMP that this location was dry and is considered to have a low impact on the dataset as the location was sampled during the second visit and the concentrations were consistent with historical results. It is noted that concentrations decreased by an order of magnitude from the prior sampling event, but are consistent with prior sampling events.
SW463	Not sampled.	Location dry.	Low impact – This was the first time during the OMP program that this location was dry, and is considered to have a low impact on the dataset. Downstream off-base location (SW416) was sampled during this event. This location was last sampled in October 2023 and reported results above the adopted drinking water criterion for sum of PFOS+PFHxS.

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Location	Deviation	Comments	Impact on Existing Dataset & Program
SW471	Not sampled.	Location dry.	Low impact – This was the first time during the OMP program that this location was dry, and is considered to have a low impact on the dataset. Downstream off-base locations (SW404 and SW416) was sampled during this event. This location was last sampled in October 2023 and reported results above the adopted drinking water criterion for sum of PFOS+PFHxS.
Sampling Event 7 – November/December 2024			
All locations	Missing pH and temperature parameter readings.	Field equipment issues were encountered during the sampling event, resulting in missing water parameter data, predominantly for pH and temperature during surface water sampling. Due to the short window available for surface water sampling replacement equipment could not be obtained in time.	Parameters affected were pH (predominantly) or temperature in surface water samples obtained, with other parameter sensors working correctly during the sampling round. The available water quality parameters are therefore considered reliable for the purposes of groundwater sampling and the majority of groundwater and surface water parameters obtained.
All locations	Missing field equipment calibration results.	One field personnel failed to record their daily 'bump test' calibration results for the water quality meter.	Following the correct calibration procedure would likely have assisted in identifying the surface water parameter sensor issues (identified above) earlier. PFAS concentrations are the primary data point required to achieve the program objectives, therefore, while measures are in place to ensure this information is captured, it is not considered to affect objective and quality of the sampling undertaken.

Table F.3: Deviations From OMP SAQP – Sediment

Location	Deviation	Comments	Impact on Existing Dataset & Program
No deviations from the OMP SAQP have been identified for sediment in any of the sampling events reviewed as part of the OMR.			

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Appendix G Water Quality Parameter Tables



Water quality parameter tables for both surface water and groundwater have been provided on the following pages. Descriptions of the water quality parameter ranges for EC, pH, DO and ORP have been summarised below.

Table G.1: Water Quality Parameter Descriptions

Parameter	Description	Reference or Comment
EC	Freshwater: 0–2,500 µS/cm Brackish Water: 2,500–5,000 µS/cm Saline Water: 5,000–50,000 µS/cm Seawater: 50,000 µS/cm	Based on general guidance discussed in Australian and New Zealand Environment and Conservation Council (ANZECC) and Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) Water Quality Guidelines (ANZECC and ARMCANZ 2000).
pH	Acidic: <6.5 Neutral: 6.5–8.5 Alkaline: >8.5	No single international standard, but commonly used ranges from groundwater and wastewater treatment sources.
DO	Hypoxic: <2 mg/L Poor aerobic: 2–5 mg/L Good aerobic: 5–8 mg/L Excellent aerobic: >8 mg/L	Based on Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG 2018) and World Health Organisation Guidelines for Drinking-Water Quality (WHO 2022) water quality standards.
ORP	Anaerobic: <0 mV Moderately Reducing: 0–200 mV Oxidising: 200–400 mV Highly Oxidising: >400 mV	No single international standard, but commonly used ranges from groundwater and wastewater treatment sources.

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Table G.1: On-base Groundwater Physiochemical Field Parameters

Event	pH	Dissolved Oxygen (DO) (mg/L)	Electrical Conductivity (EC) (µS/cm)	Total Dissolved Solids (TDS)[1] (mg/L)	Oxidation Reduction Potential (ORP) (mV)
Shepparton Colluvium – Perched – On-base					
E6	6.37 (MW056)	1.60 (MW056)	561 (MW056)	364.7 (MW056)	159.5 (MW056)
	Slightly acidic	*Hypoxic conditions*	*Freshwater*	*Freshwater*	*Moderately reducing conditions*
E7	6.57 (MW056)	3.12 (MW056)	407 (MW056)	264.7 (MW056)	-150.1 (MW056)
	Neutral	*Poor aerobic conditions*	*Freshwater*	*Freshwater*	*Anaerobic conditions*
Shepparton Colluvium – Shallow – On-base					
E6	6.27 (MW307) – 9.40 (MW342)	2.11 (MW342) – 4.31 (MW312)	1,162 (MW342) – 12,632 (MW304)	755.3 (MW342) – 8,210.8 (MW304)	110.1 (MW342) – 189.7 (MW304)
	Neutral to moderately alkaline	*Poor aerobic conditions*	*Freshwater to saline water*	*Freshwater to saline water*	*Moderately reducing conditions*
E7	5.51 (MW323) – 9.83 (MW342) [2]	0.62 (MW051) – 5.62 (MW342)	47 (MW312) – 6,581 (MW304)	30.7 (MW312) – 4,277.7 (MW304)	-177.2 (MW416) – 102.6 (MW311) [3]
	Slightly acidic to moderately alkaline	*Hypoxic to good aerobic conditions*	*Freshwater to saline water*	*Freshwater to saline water*	*Anaerobic to moderately reducing conditions*
Shepparton and Coonambidgal Fluvium – Shallow – On-base					
E6	5.53 (MW029) – 7.12 (MW346)	0.85 (MW043) – 3.96 (MW350_S)	108 (MW052) – 5,630 (MW345)	70.7 (MW052) – 3,659.5 (MW345)	-83.4 (MW052) – 188.5 (MW029)
	Slightly acidic to neutral	*Hypoxic to poor aerobic conditions*	*Freshwater to saline water*	*Freshwater to saline water*	*Anaerobic to moderately reducing conditions*
E7	5.78 (MW052) – 6.62 (MW345)	0.79 (MW346) – 24.60 (MW353)	96 (MW029) – 5,201 (MW345)	62.4 (MW029) – 3,380.7 (MW345)	-353.0 (MW029) – 43.9 (MW353)
	Slightly acidic to neutral	*Hypoxic to excellent aerobic conditions*	*Freshwater to saline water*	*Freshwater to saline water*	*Anaerobic to moderately reducing conditions*
Shepparton and Coonambidgal Fluvium – Intermediate – On-base					
E6	5.86 (MW009) – 6.27 (MW046_I)	0.79 (MW009) – 1.31 (MW046_I)	238 (MW046_I) – 273 (MW009)	154.8 (MW046_I) – 177.7 (MW009)	74.8 (MW046_I) – 187.4 (MW009)
	Slightly acidic	*Hypoxic conditions*	*Freshwater*	*Freshwater*	*Moderately reducing conditions*
E7	6.05 (MW046_I) – 6.49 (MW009)	0.88 (MW046_I) – 6.72 (MW009) [4]	255 (MW046_I) – 375 (MW042)	166.1 (MW046_I) – 244.1 (MW042)	-107.4 (MW009) – 57.8 (MW042)
	Slightly acidic	*Hypoxic to good aerobic conditions*	*Freshwater*	*Freshwater*	*Anaerobic to moderately reducing conditions*
Shepparton and Coonambidgal Fluvium – Deep – On-base					
E6	5.96 (MW350_D) – 6.27 (MW046_D)	0.91 (MW046_D) – 1.55 (MW350_D)	202 (MW350_D) – 230 (MW046_D)	131.5 (MW350_D) – 150.1 (MW046_D)	76.7 (MW046_D) – 103.3 (MW350_D)
	Slightly acidic	*Hypoxic conditions*	*Freshwater*	*Freshwater*	*Moderately reducing conditions*
E7	6.11 (MW046_D) – 6.55 (MW350_D)	1.13 (MW046_D) [5]	259 (MW046_D) – 259 (MW350_D)	168.6 (MW046_D) – 168.9 (MW350_D)	-120.0 (MW350_D) – 56.0 (MW046_D)
	Slightly acidic to neutral	*Hypoxic conditions*	*Freshwater*	*Freshwater*	*Anaerobic to moderately reducing conditions*

Notes:

1. EC in µS/cm converted to TDS in mg/L by multiplying by 0.65.
2. JBS&G SER identifies the result for MW342 (9.83) to be potentially anomalous, however it is consistent with historic results, and as such, has been left in this table.
3. JBS&G SER identifies the result for MW307 (-4,907.0 mV) to be potentially anomalous, as it is not consistent with other historic values nor surrounding wells. It has been excluded from this summary table.
4. JBS&G SER identifies the result for MW042 (21.9 mg/L) to be potentially anomalous, as it is not consistent with other historic values nor surrounding wells. It has been excluded from this summary table.
5. JBS&G SER identifies the result for MW350_D (8.46 mg/L) to be potentially anomalous, as it is not consistent with other historic values nor surrounding wells. It has been excluded from this summary table.

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Table G.2: Off-base Groundwater Physiochemical Field Parameters

Event	pH	DO (mg/L)	EC (µS/cm)	TDS[1] (mg/L)	ORP (mV)
Shepparton Colluvium – Shallow – Off-base					
E6	6.18 (MW361) – 7.44 (MW360)	1.20 (MW361) – 3.92 (MW360)	370 (MW360) – 1,031 (MW361)	240.2 (MW360) – 670.2 (MW361)	37.7 (MW361) – 142.8 (MW360)
	Slightly acidic to neutral	*Hypoxic to poor aerobic conditions*	*Freshwater*	*Freshwater*	*Moderately reducing conditions*
E7	7.40 (MW361) – 7.68 (MW360)	3.22 (MW360) [2]	455 (MW361) – 775 (MW360)	295.8 (MW361) – 503.8 (MW360)	-92.4 (MW361) – 42.2 (MW360)
	Neutral	*Poor aerobic conditions*	*Freshwater*	*Freshwater*	*Anaerobic to moderately reducing conditions*
Shepparton and Coonambidgal Fluvium – Shallow – Off-base					
E6	6.18 (MW357) – 6.60 (MW356)	0.65 (MW357) – 4.00 (MW356)	163 (MW357) – 174 (MW356)	106.0 (MW357) – 113.0 (MW356)	-38.2 (MW356) - -34.6 (MW357)
	Slightly acidic to neutral	*Hypoxic to poor aerobic conditions*	*Freshwater*	*Freshwater*	*Anaerobic conditions*
E7	6.15 (MW357) – 7.23 (MW356)	1.23 (MW356) [3]	97 (MW356) – 154 (MW357)	63.1 (MW356) – 100.1 (MW357)	-133.7 (MW356) – -4.9 (MW357)
	Slightly acidic to neutral	*Hypoxic conditions*	*Freshwater*	*Freshwater*	*Anaerobic conditions*

Notes:

1. EC in µS/cm converted to TDS in mg/L by multiplying by 0.65.
2. No DO reading was obtained for MW361 during this sampling event.
3. No DO reading was obtained for MW357 during this sampling event.

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Table G.3: Surface Water Quality Field Parameters

Event	pH	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	ORP (mV)
On-base					
E6	5.80 (SW322) – 9.86 (SW338)	2.00 (SW387) – 8.16 (SW338)	29 (SW382) – 473 (SW321)	19.1 (SW382) – 307.7 (SW321)	-35.2 (SW338) – 158.3 (SW387)
	Moderately acidic to moderately alkaline	*Poor to excellent aerobic conditions*	*Freshwater*	*Freshwater*	*Anaerobic to moderately reducing conditions*
E7	5.23 (SW302) – 8.62 (SW338)	1.91 (SW326) – 8.16 (SW388)	16 (SW380) – 757 (SW332)	10.4 (SW380) – 492.1 (SW332)	-149.5 (SW382) – 585.3 (SW349) [2]
	Moderately acidic to slightly alkaline	*Hypoxic to excellent aerobic conditions*	*Freshwater*	*Freshwater*	*Anaerobic to highly oxidising conditions*
Off-base					
E6	5.85 (SW409) – 7.80 (SW487)	1.02 (SW448) – 7.14 (SW416)	42 (SW398) – 410 (SW487)	27.3 (SW398) – 266.9 (SW487)	-51.9 (SW448) – 165.3 (SW395/SW412)
	Moderately acidic to neutral	*Hypoxic to good aerobic conditions*	*Freshwater*	*Freshwater*	*Anaerobic to moderately reducing conditions*
E7	6.90 (SW397) – 8.00 (SW487) [2]	0.43 (SW401) – 9.70 (SW397)	30 (SW404) – 452 (SW396)	19.5 (SW404) – 293.8 (SW396)	-147.2 (SW396) – 90.9 (SW487)
	Neutral	*Hypoxic to excellent aerobic conditions*	*Freshwater*	*Freshwater*	*Anaerobic to moderately reducing conditions*

Notes:

1. EC in µS/cm converted to TDS in mg/L by multiplying by 0.65.
2. Much of the on-base ORP readings were unavailable owing to equipment fault issues.
3. Much of the off-base pH readings were unavailable owing to equipment fault issues.

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Appendix H Other Relevant Work Summaries



H.1 DSI Addendum

H.1.1 Background and Objective

The DSI Addendum (JBS&G 2024a) was conducted to gather additional data on PFAS contamination, focusing on Source Area 6 in South Bandiana and Source Area 13 in East Bandiana. The investigation aimed to better define the extent and mobility of PFAS within these areas and assess migration pathways to off-base locations. This information supports PMAP Response Actions and informs the development of a Remedial Action Plan (RAP).

H.1.2 Soil Results

The investigation identified PFAS concentrations in soil below and immediately around the facility infrastructure at both Source Area 6 and 13, which reduced significantly with distance from the infrastructure. Due to the clayey geology, PFAS primarily occurred within the top 1.0 m of soil in Source Area 6.

Sandier geology at Source Area 13 allowed PFAS to migrate deeper to the extent of soil investigation of 4.0 mbgl. Investigations of Source Area 14 and 15 and the Diffuse Sources within East Bandiana did not identify PFAS in soils above adopted tier 1 human health screening criteria and concentrations that warranted action to manage potential for migration to groundwater.

H.1.3 Surface Water Results

PFAS was identified around stormwater infrastructure associated with Source Areas 6 and 13. PFAS was found to be readily mobilised from different media (soil, concrete and asphalt, porewater) and was present in surface water runoff. Investigations into drainage infrastructure and topography found direct pathways via surface water from Source Area 6 to Jack in the Box Creek and from Source Area 13 to the oxbows in the Kiewa River floodplain.

H.1.4 East Bandiana Aquifer Characterisation Results

The aquifer characterisation investigation conducted across East Bandiana and the off-base immediately to the north, identified a deeper sand horizon at a depth of approximately 11-14 mbgl. PFAS concentrations are generally an order of magnitude higher in the deeper sand horizon compared to those reported in shallow wells. The deeper sand horizon has a relatively high hydraulic conductivity (10-20 m/day) and appears to be continuous across East Bandiana although its thickness is variable. Multiple lines of evidence (comparable survey depths, geochemical and PFAS data) indicate that the deeper sand horizon intercepts the oxbow lakes in the Kiewa River floodplain to the north of the base.

This finding was one of the key outcomes for this investigation and was used to refine the CSM, identifying the deeper sand horizon as a key pathway for groundwater migration across East Bandiana. This finding updated the previously proposed interconnected sand stringer theory that was thought to drive groundwater and PFAS migration (as identified in the DSI (Golder 2018)).

H.1.5 CSM Update

Through the DSI Addendum (JBS&G 2024a), JBS&G confirmed the key CSM pathway for the migration of PFAS off the base for South and North Bandiana was via surface water. The key migration pathways for East Bandiana were both surface water and groundwater, although, based on previous development work across this portion of the base, it was considered unlikely that significant PFAS mass was migrating via the surface water pathway. This was confirmed as part of the Mass Flux Study (JBS&G 2024b) (see **Section H.2**).

Overall, PFAS concentrations in soil, sediment, groundwater and surface water at the site were comparable to previous studies (i.e. DSI (Golder 2018) and HHERA (Golder 2020)), with no change in the risk profile for on-base or off-base receptors. As such, JBS&G did not identify contamination which poses a risk of harm that requires immediate remedial or management responses on base or within the Management Area.

H.1.6 Remedial Response

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The DSI Addendum (JBS&G 2024a) indicated that future works should focus on reducing PFAS migration from the base through remediation and/or management, along with ongoing monitoring of PFAS concentrations and land use across the Management Area (to ensure an ongoing low and acceptable risk level). The DSI Addendum (JBS&G 2024a) concluded that an appropriate remedial response to address the PMAP Management Action will likely involve a combination of Source Area and remediation and/or management of affected pathways.

H.2 Mass Flux Study

H.2.1 Background and Objective

The Mass Flux Study (JBS&G 2024b) was completed by JBS&G over an approximate 21-month period extending from July 2022 through to April 2024. The overarching objective of the Mass Flux Study was to support closure of PMAP Actions 1 and 2, although the specific sub-objectives of the investigation included:

- Quantifying the overall annual PFAS mass flux from the base to off-base areas:
    - Via overland flow and the base stormwater network; and
    - Via groundwater flow.
- Further understanding of baseline concentrations of PFAS migrating off-base in order to allow a post remediation comparison;
- Further quantify the contribution of PFAS into stormwater and groundwater from Source Areas to inform future implementation of PMAP Actions (i.e. a RAP); and
- Quantify overland flow and stormwater flow during peak flow events and determine the seasonality of PFAS mass flux from the base.

H.2.2 Mass Flux Study Results

Through the completion of the Mass Flux Study, there is now a comprehensive understanding of the pathways through which PFAS discharges off-base and the estimated flux through these pathways. The Mass Flux Study confirmed the CSM DSI Addendum (JBS&G 2024a), in that the primary off-base PFAS migration pathway for South and North Bandiana was via surface water, while the primary pathway for East Bandiana was via groundwater. This relationship is evident in the estimated mass flux numbers provided in the following **Table H.1**, although it is noted that surface water mass flux is approximately 30% higher than would occur on an average non-La Nina year.

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Table H.1: Estimated Mass Flux Summary

Base Area	Media	Approximate Mass Flux – Sum of PFOS+PFHxS (g/year)	Approximate Mass Flux – Sum of PFAS (g/year)
South Bandiana	Groundwater	<1	<1
	Surface water[1]	362	434
North Bandiana	Groundwater	1	1
	Surface water[2]	338	461
East Bandiana	Groundwater	66	93
	Surface water	2	4
	Sewerage	3	3

Note:

1. Surface water calculations relate only to the western portion of South Bandiana, based on the hydraulic divide that runs through this portion of the base.
2. The surface water exiting from the North Bandiana boundary is a combination of flows from the eastern portion of South Bandiana (see comment above), plus flows from North Bandiana.

It is noted that the Mass Flux Study did not identify a seasonal concentration/flux trend and only slightly higher PFAS concentrations were observed in the 'first flush' samples of the study.

While the Mass Flux Study provided a broader understanding of PFAS movement across the base boundaries, the study provided further information at a sub-catchment level, highlighting the contributions of individual Source Areas. Both Source Area 1 and Source Area 7 on South Bandiana generated surface water with PFAS concentrations an order of magnitude higher downstream from the Source Area, compared to upstream. This indicates that surface PFAS contamination is likely more widespread than previously characterised in the DSI (Golder 2018) and DSI Addendum (JBS&G 2024a), and as such, further investigation of these areas is underway.

As mentioned in **Section H.1.6**, the DSI Addendum (JBS&G 2024a) indicated an appropriate remedial response to reduce PFAS migration from the base would likely involve a combination of Source Area and pathway remediation and/or management. The Mass Flux Study (JBS&G 2024b) confirmed this conclusion and assisted in refining the understanding of Source Areas and pathways requiring attention.

H.3 Source Area 1 and 7 Further Investigation

H.3.1 Background and Objective

As identified in the Mass Flux Study (JBS&G 2024b) summarised previously, higher PFAS concentrations in surface water were identified migrating away from Source Area 1 and Source Area 7 in South Bandiana. In addition to this, the OMP program identified relatively higher PFAS concentrations in one well in each of the Source Areas (MW307 and MW321 respectively). Based on these findings, additional investigation work was completed within both Source Areas to assess the potential effect on soils and infrastructure from PFAS-based AFFF training and use. The further assessment was used to assess the influence of PFAS in soil on measured concentrations in groundwater and surface water runoff.

The investigation and findings were documented within the Source Area 1 and 7 Further Investigation report[11] (JBS&G 2025a).

[11] Source Areas 1 and 7 Further Investigation – PFAS Management Area Plan (PMAP) Delivery at Bandiana Military Area. Document number 61395/162,538 Rev 0. JBS&G Australia Pty Ltd. 1 May 2025 (JBS&G 2025a)

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H.3.2 Soil Results

Soil results from the investigation are summarised as follows:

- **Source Area 1**: The highest PFAS concentrations were identified around and down-gradient of the earthen bund where training with AFFF products is known to have occurred, with lower concentrations of PFAS across the balance of the Source Area. It was concluded that the combination of widespread low-concentration PFAS in soils across Source Area 1 and the flat, deeper clayey conditions of the soil across the area were considered to contribute to higher concentrations in surface water run-off. Furthermore, shrinking and cracking of the clay dominated geology during dry periods is a mechanism by which PFAS can migrate downwards into groundwater in the vicinity of the earthen bund; and
- **Source Area 7**: The highest PFAS concentrations were identified to the west and north of the former fire station compound. The PFAS concentrations identified in surface soils across Source Area 7 were considered consistent with the surface water concentrations identified in the Mass Flux Study (JBS&G 2024b). Similar to Source Area 1, the shrinking and cracking of clayey geology is a mechanism by which PFAS can migrate into groundwater.

H.3.3 Remedial Response

While the contamination identified in both Source Areas did not pose a current risk to human health, the investigation did confirm that the Source Areas will require remediation and/or management action in order to assist in achieving PMAP Risks Management Actions.

H.4 OMR 2021-22-23

The following is a summary of the OMP program investigations that have been completed between 2021 and 2023. Specific analytical data and recorded observations from these works have been presented throughout **Sections 8** and **9**, to assist in discussing the 2024 data set.

H.4.1 Objective

The OMR – 2021, 2022 and 2023 (JBS&G 2025b) presented and evaluated the OMP data from five sampling events (November 2021, May 2022, October 2022, May 2023 and October 2023) completed by Stantec within the context of the PMAP (Defence 2020) and other investigations which have been completed across the base.

H.4.2 Groundwater

Groundwater levels were influenced by the above average rainfall experienced during the OMR reporting period, with levels at some wells 1.5 m higher during the 2022 monitoring events compared with 2021 and 2023. This water level change may have contributed to some minor increasing PFAS concentration trends (i.e. less than an order of magnitude) in some wells. Additional monitoring is required to establish trends during average conditions to determine if further action is warranted.

Groundwater flow directions across the base are consistent with the conceptual understanding of groundwater movement from topographically high to topographically low areas. The Shepparton Colluvium shallow aquifer (South Bandiana and North Bandiana) flows in a west and north westerly direction towards Jack in the Box Creek, while the Shepparton and Coonambidgal Fluvium aquifer at East Bandiana flows in a north easterly direction towards the Kiewa River.

The groundwater results from the five OMP sampling rounds are relatively stable and consistent with the outcomes of historical and recent investigations. PFAS concentrations within the Shepparton Colluvium shallow aquifer, in North and South Bandiana are stable, with PFAS concentrations restricted to the portions of the base in and immediately surrounding the previously identified Source Areas. PFAS concentrations within the Shepparton and Coonambidgal Fluvium aquifers at East Bandiana are also relatively stable, although a PFAS plume is present from Source Area 13 across to the north eastern base boundary, which is consistent with the findings of historical and more recent investigations.

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The OMR data, in addition to other investigations on the base, has identified PFAS concentrations in MW307 in Source Area 1 on South Bandiana and MW321 in Source Area 7, also on South Bandiana, above 1.0 mg/L. Both areas were subsequently investigated further to assist in better understanding the OMP results (refer to **Section H.3**).

H.4.3 Surface Water

Surface water results obtained from the five OMP sampling rounds indicate relatively consistent concentrations and align with the identified Source Areas and their respective pathways to off-base areas. This includes identified surface water PFAS concentrations associated with select Source Areas (1, 5, 6 and 7) across South Bandiana being transported into Jack in the Box Creek and Kiewa River off-base catchments. The results also confirm that surface water is not a primary migration pathway for East Bandiana. Surface water results in the off-base Kiewa River floodplain considered to primarily be the result of groundwater migration (as per the findings of recent PFAS investigations).

Several anomalous results were identified during the OMR period, including those from SW326, SW332 and SW398. These sample locations will continue to be monitored to determine the significance of the anomalous results.

Based on the surface water data from the five OMP sampling events, no clear correlation or pattern was identified between above average rainfall and PFAS concentrations.

H.4.4 Sediment

Sediment PFAS concentrations within surface water drainage pathways are representative of their location relative to Source Areas. Higher concentrations were identified in areas immediately adjacent Source Areas/in areas. Sediment PFAS concentrations tend to decrease with distance from a Source Area.

H.4.5 Risk Summary

The OMP results from the OMR – 2021, 2022 and 2023 (JBS&G 2025b) did not identify any additional Source Areas which had not been previously assessed and no additional transport/exposure pathways or changes to existing pathways have been identified.

The OMP analytical results discussed as part of the OMR were within ranges identified and considered in previous investigation reports. Where PFAS increases have been identified during an OMP event, a review was completed of the source-receptor pathway to identify if there has been a change in risk to on and off-base receptors. No change in risk was identified.

Based on the review completed as part of the OMR, it was not considered necessary to update the current CSM.

H.4.6 Conclusions

Based on the assessment completed as part of the OMR it was concluded that the objectives of the OMP had been achieved by the program. The assessment identified that PFAS concentrations during the 2021 to 2023 period were consistent with previous investigation and historic data, with the exception of several locations listed above. As a result, there has been no material change in risk to on and off-base receptors.

While the existing monitoring network is sufficient to continue monitoring of PFAS identified within Source Areas and migration pathways, there were several recommended alterations to the OMP monitoring program, including the following:

- Further monitoring of groundwater is recommended immediately off-base to the north of East Bandiana, to delineate the known East Bandiana PFAS plume to the oxbow lake closest to the base boundary, which is a known receptor. With this improved monitoring between the base and the receptor, the sampling frequency of all on-base wells across East Bandiana can be reduced from biannual to annual;

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- Owing to the proximity of Source Area 1 to the base boundary and increases in MW307, it is recommended that additional down-gradient wells be included in the OMP to ensure delineation of potential PFAS plume migration;
- Monitor additional wells in North Bandiana to ensure adequate data is available to calculate groundwater flow contours in this portion of the base, and to delineate groundwater PFAS concentrations in MW342;
- Off-base monitoring through the provision of a new well to the east of North Bandiana to characterise the PFAS plume prior to potentially entering the Killara residential development. With this improved monitoring between the base and the receptor, the sampling frequency of North Bandiana wells MW345 and MW346 can be reduced from biannual to annual; and
- Discontinuation of sediment sampling as part of the OMP.

Defence is currently in the process of reviewing the base PMAP and associated OMP, and will incorporate the above identified program alterations.

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Appendix I Results Interpretation Tables



A detailed summary of the OMP groundwater results in the context of the revised CSM is set out in the following table. Groundwater sampling locations have been grouped by Source Areas/areas of interest. Source Areas are shown in **Figure 2** while groundwater sampling locations are shown in **Figure 4**.

Table I.1: Interpretation of Groundwater OMR Results

Sample Location/s	Target Area	Monitoring Undertaken	Discussion of Results and Screening Criteria Exceedances	Rationale for Observed Results/Changes
Shepparton Colluvium – Perched – On-base				
MW056	Source Area 9	This sampling location targets the shallow perched water in Source Area 9. Sampling was undertaken at this location during both events covered in this OMR, but was only sampled twice during previous OMP rounds.	Results have been relatively consistent during 2024, ranging from 1.14 to 1.86 µg/L for sum of PFOS+PFHxS, which exceeds the PFAS NEMP 2025 Drinking Water criterion. Historical results range from 0.01 to 1.50 µg/L.	The difference in concentration between sample rounds is not considered significant (i.e. order of magnitude difference) and is consistent with the historical use of this area.
Shepparton Colluvium – Shallow – On-base				
MW315, MW317, MW318	Source Area 2	These sample locations target Source Area 2. MW315 and MW317 were both sampled during the November/December 2024 sampling event, and only MW315 has been sampled (once) during previous OMP rounds. MW318 has consistently been dry during OMP.	During both sampling rounds, MW315 was below the LOR. MW317 had a sum of PFOS+PFHxS concentration of 0.05 µg/L, which is below health-based criteria. Downgradient wells from Source Area 2 have been sampled and analysed (MW313, approximately 200 m to the northwest) which identified PFAS concentrations just above LOR (similar to MW317).	Source Area 2 is located in an elevated position on the slopes of Bears Hill, as such, groundwater is at considerable depth at this location (approximately 42 mbgl). Based on the results, the limited PFAS in soil within this Source Area appears to have migrated primarily through surface water rather than groundwater. These results confirm that surface water and not groundwater is the primary pathway for this portion of South Bandiana, as identified in the results of the Mass Flux Study (JBS&G 2024b).
MW311, MW304, MW307	Source Area 1	Monitoring wells MW307 and MW311 are located within Source Area 1. MW304 is located further north and represents groundwater leaving the base to the north.	The analytical results from 2024 have been relatively consistent when compared with all OMP data, although it is acknowledged that the concentrations in MW307 appear to oscillate across individual sampling events. • MW307 results ranged from 172 to 780 µg/L for sum of PFOS+PFHxS (both exceeding PFAS NEMP 2025 Recreational Water criterion) during 2024, although historic concentrations for this location range from 72.0 to 950 µg/L; • MW304 results range from 0.51 to 1.74 µg/L for sum of PFOS+PFHxS (both exceeding PFAS NEMP 2025 Drinking Water criterion) during 2024, although historic concentrations for this location range from below LOR to 0.62 µg/L; and • MW311 results were 0.04 µg/L for sum of PFOS+PFHxS during both 2024 sampling rounds (both results being less than PFAS NEMP 2025 Recreational and Drinking Water criteria), with historic ranges being below LOR to 0.02 µg/L.	MW307 is located immediately adjacent the earthen bund in Source Area 1 which has been identified as formerly being used for firefighting activities. The highest PFAS in soil concentrations within Source Area 1 has been identified in the vicinity of the well and earthen bund, and recent investigations suggest shrinking and cracking of the predominantly clay geology in this area is a mechanism for PFAS to migrate to groundwater. Remediation has been proposed for both soil and groundwater in the vicinity of MW307. MW304 is located directly down hydraulic gradient from MW307 and there is an approximate four orders of magnitude reduction in PFAS concentrations over the 260 m between the two locations. A slight increase in results can be seen across all results available for this well (not including the below LOR result during the October 2023 sampling event). The location will continue to be monitored to understand any potential changes in PFAS risk. Groundwater in the western portion of Source Area 1 (MW311) is characterised by low PFAS concentrations, consistent with the conceptual understanding of the Source Area. Given the concentration in MW307, it is considered the OMP program would benefit from the addition of wells MW302, MW303 and MW305 to assist in delineation of groundwater results in Source Area 1. Proposed new monitoring locations have been shown on **Figure 9A**.
MW051, MW416, MW323	Source Area 6	All sampling locations are positioned within Source Area 6, with the exception of MW323 which is downgradient.	Concentrations within MW051 and MW416 have increased an order of magnitude during the November/December 2024 sampling event compared with previous results, which were consistent at just above the LOR. • MW051 had a November/December 2024 sum of PFOS+PFHxS concentration of 3.71 µg/L (exceeding both PFAS NEMP 2025 Drinking Water and Recreational Water criteria), while historic results have ranged from below LOR to 0.16 µg/L; • MW416 had a November/December 2024 sum of PFOS+PFHxS concentration of 1.18 µg/L (exceeding the PFAS NEMP 2025 Drinking Water criterion), while historic results have ranged from below LOR to 0.05 µg/L; and • MW323 has consistently recorded results below the LOR for all sampling events.	While Source Area 6 has been identified as a key Source Area within the PMAP owing to historic activities, PFAS in soils sampled across the source area has been defined through sampling both laterally and vertically with in the upper 1.0 mbgl, and PFAS in groundwater has historically been low. PFAS in the downgradient well MW323 has consistently been below LOR. These results infer that lateral migration of PFAS in groundwater is limited, which concurs with the findings of the DSI Addendum (JBS&G 2024a). Higher concentrations identified in samples from MW051 and MW416 during the November/December 2024 sampling round will continue to be monitored to understand any potential changes in PFAS risk. It is noted that Source Area 6 will be subject to remediation works during 2025, which will comprise demolition of the current infrastructure and targeted soil treatment to reduce PFAS migration. The need for ongoing monitoring of Source Area 6 following remediation will be reviewed as part of a future OMP revision.
MW321, MW319	Source Area 7	Both sampling locations are on the downgradient boundaries of Source Area 7.	The analytical results for MW319 have been relatively consistent across all OMP sampling rounds, including the 2024 rounds which recorded sum of PFOS+PFHxS concentrations between 0.17 and 0.22 µg/L (exceeding the PFAS NEMP 2025 Drinking Water criterion).	Recent investigations at Source Area 7 (JBS&G 2025a), identified some of the highest PFAS concentration on the base in the vicinity of MW321. Furthermore, shrinking and cracking of the predominantly clay geology in this area is a mechanism for PFAS to migrate to groundwater. Remediation has been proposed for both soil and groundwater in the vicinity of MW321.

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Sample Location/s	Target Area	Monitoring Undertaken	Discussion of Results and Screening Criteria Exceedances	Rationale for Observed Results/Changes
			MW321 had a significant (four orders of magnitude) PFAS concentration increase between 2022 and 2023, with these concentrations persisting through 2024. Sum of PFOS+PFHxS concentrations for 2024 ranged from 984 to 1,350 µg/L (exceeding both PFAS NEMP 2025 Drinking Water and Recreational Water criteria), which is the highest concentration recorded at this location.	
MW329	Source Area 5	MW329 is located immediately to the west of Source Area 5.	The analytical results have been relatively consistent across all OMP sampling rounds. Results for 2024 ranged between 0.59 and 0.69 µg/L for sum of PFOS+PFHxS, which exceed PFAS NEMP 2025 Drinking Water criterion, with historic ranges of 0.95 to 1.28 µg/L.	The results confirm that groundwater is not a primary pathway for PFAS migration in this area of the base, consistent with the findings of the DSI (Golder 2018) and the Mass Flux Study (JBS&G 2024b).
MW312	Northern boundary of South Bandiana	MW312 is located on the northern boundary of South Bandiana and provides an indication of groundwater conditions which are leaving the base to the north.	The analytical results have been relatively consistent across all OMP sampling rounds. While concentrations rose slightly during 2023, they returned to 2022 levels by the November/December 2024 sampling round. Sum of PFOS+PFHxS concentrations for 2024 ranged from 0.11 to 0.37 µg/L, which exceeds PFAS NEMP 2025 Drinking Water criterion, while historic ranges were 0.10 to 0.37 µg/L.	The results confirm that groundwater is not a primary pathway for PFAS migration in this portion of the base, in line with the findings of the Mass Flux Study (JBS&G 2024b).
MW342	Source Area 12	MW342 is located immediately downgradient of Source Area 12 on North Bandiana.	The analytical results have been relatively consistent across all OMP sampling rounds. Sum of PFOS+PFHxS concentrations from 2024 ranged from 5.21 to 11.6 µg/L, which exceed PFAS NEMP 2025 Recreational and Drinking Water criteria. Historic concentrations range from 4.81 to 13.5 µg/L.	While the groundwater results are elevated (i.e. >1.0 mg/L) compared to other areas of the base, downgradient and boundary wells have lower or below LOR results, indicating the elevated PFAS concentrations are confined to a small area. This is supported by the Mass Flux Study (JBS&G 2024b). Based on review of the data, the OMP program would benefit from monitoring of additional groundwater wells which are closer to MW342, other than the current boundary wells. MW343 and MW344 are additional down-gradient wells in closer proximity which could be added to the program and assist in delineation of the results at MW342. The inclusion of these wells would also assist is providing sufficient data to calculate groundwater flow direction in this portion of the base. Proposed new monitoring locations have been shown on **Figure 9B.**
Shepparton Colluvium – Shallow – Off-base				
MW313	Western boundary of South Bandiana	MW313 is located close to the western boundary of South Bandiana between the base and Wodonga South residential development. As indicated above, the well is also used to provide downgradient data for the wells that are usually dry in Source Area 2.	Analytical results from MW313 have recorded sum of PFOS+PFHxS concentrations below LOR during 2024, with historic ranges below LOR to 0.02 µg/L.	Results confirm that PFAS in groundwater is not a primary pathway across this portion of the base boundary.
MW360, MW361	Jack in the Box Creek Catchment	MW360 and MW361 are located along the Jack in the Box Creek alignment, approximately 1.0 km and 2.5 km downgradient from the base boundary respectively. These are sampled to assist in understanding potential groundwater/ surface water interactions.	The analytical results have been relatively consistent for both wells across all OMP sampling rounds. • MW360 had a 2024 sample round sum of PFOS+PFHxS concentrations ranging from 0.07 to 0.31 µg/L (the latter exceeding the PFAS NEMP 2025 Drinking Water criterion), while historic results have ranged from 0.11 to 0.17 µg/L; and • MW361 had a 2024 sample round sum of PFOS+PFHxS concentrations ranging from 0.30 to 0.39 µg/L (with both results exceeding the PFAS NEMP 2025 Drinking Water criterion), while historic results have ranged from 0.11 to 0.21 µg/L.	The corresponding surface water OMP locations, SW427 and SW430 respectively, record very similar PFAS concentrations to the wells at each location, although the water parameters readings differ.
Shepparton and Coonambidgal Fluvium – Shallow – On-base				
MW345, MW346	Western boundary of North Bandiana	These wells are in the western portion of North Bandiana, with MW346 on the base boundary and MW345 approximately 250 m west of the base boundary.	The analytical results have been relatively consistent for both wells across all OMP sampling rounds. • MW345 had a 2024 sample round sum of PFOS+PFHxS concentrations ranging from 0.18 to 0.24 µg/L (with both results exceeding the PFAS NEMP 2025 Drinking Water criterion), while historic results have ranged from 0.24 to 0.34 µg/L; and • MW346 had a 2024 sample round sum of PFOS+PFHxS concentrations ranging from below LOR to 0.03 µg/L (below adopted criteria), while historic results have ranged from below LOR to 0.17 µg/L. The	The results confirm that groundwater is not a primary pathway for PFAS migration in this portion of the base, consistent with the findings of the Mass Flux Study (JBS&G 2024b). Based on review of the data, and the PFAS concentrations identified on the base boundary, it is considered beneficial to the OMP program that the newly installed well in the Killara residential development (MW447, as shown on **Figure 9B**) be regularly sampled. This would ensure additional data is available to track a PFAS plume in groundwater if it is travelling off-base to the east, although it is noted that the North Bandiana boundary well (MW346) concentrations are just above LOR. With this improved monitoring between the base and the receptor, the sampling frequency of North Bandiana wells MW345 and MW346 can be reduced from biannual to annual.

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Sample Location/s	Target Area	Monitoring Undertaken	Discussion of Results and Screening Criteria Exceedances	Rationale for Observed Results/Changes
			October 2022 result of 0.17 µg/L of sum of PFOS+PFHxS, would appear anomalous as concentrations have remained close to LOR in the four sampling rounds since.	
MW052, MW403, MW404, MW350_S	Source Area 13	The sample locations target Source Area 13.	The analytical results have been relatively consistent for all wells across all OMP sampling rounds, with sum of PFOS+PFHxS concentrations from 2024 ranging from 6.0 to 178.0 µg/L, all of which exceed PFAS NEMP 2025 Drinking Water and Recreational Water criteria. Historic ranges for these wells range between 11.0 and 214.0 µg/L.	The data identifies that the down-gradient wells from the fire station facility (MW403, MW404 and MW350_S) have higher concentrations (approximately one order of magnitude) than the upgradient well (MW052). The OMP groundwater and surface water results confirm the current conceptual understanding of Source Area 13, as detailed in the DSI Addendum (JBS&G 2024a) and Mass Flux Study (JBS&G 2024b).
MW353, MW012, MW354, MW029	Groundwater conditions through the central portion of East Bandiana	These wells are located to assist in delineating the PFAS plume from Source Area 13.	MW353 had a sum of PFOS+PFHxS concentration increase by an order of magnitude during the 2024 sampling rounds. The November/December sampling round was 43.0 µg/L compared to 4.93 µg/L for April 2024, and 4.94 through 18.8 µg/L for historic ranges. All OMP results exceed PFAS NEMP 2025 Recreational Water and Drinking Water criteria. It is noted that this well is directly downgradient from Source Area 13, and its PFAS concentrations are approximately one to two orders of magnitude lower than reported in the Source Area. MW012 and MW354 are also downgradient to the east of the plume, with MW029 cross-gradient to the south of the Source Area. The analytical results have been relatively consistent for all three wells across all OMP sampling rounds, including those from 2024. Sum of PFOS+PFHxS concentrations range from 0.05 to 1.28 µg/L, the majority of which exceeds PFAS NEMP 2025 Drinking Water criterion.	The delineation of the Source Area 13 PFAS plume using the OMP results is similar to the plume layout defined during the DSI Addendum (JSB&G 2024a). The East Bandiana PFAS plume has been defined as part of the DSI Addendum (JBS&G 2024a). This identified a relatively narrow plume which is largely confined to the top-most aquifer within Source Area 13 that expands laterally and into deeper part of the aquifer by approximately the centre of East Bandiana, then remains relatively consistent until the base boundary. The OMP well results reflect this understanding, with MW353 close to the centre of the plume, while MW029 and MW354 are located on the southern and eastern edges of the plume respectively. This groundwater pathway will be the target of upcoming remediation. It is proposed to install a groundwater extraction and treatment system along the boundary of East Bandiana to reduce the migration of PFAS into off-base areas via groundwater.
MW016, MW035, MW043, MW034, MW020, MW018	Groundwater conditions along the north central boundary of East Bandiana	The sample locations are positioned across the northern portion of East Bandiana to assist in downgradient delineation of the Source Area 13 PFAS plume in the shallow zone.	MW016, MW020, MW034, MW035 and MW043 consistently recorded sum of PFOS+PFHxS concentrations in the range of approximately 2.0 and 17.0 µg/L (depending on their location in the plume), which exceed PFAS NEMP 2025 Recreational Water and Drinking Water criteria. MW018, on the eastern edge of the plume, has a lower sum of PFOS+PFHxS concentrations in the range of approximately 0.6 to 1.1 µg/L, which exceeds PFAS NEMP 2025 Drinking Water criterion. MW018 is displaying a slight increasing PFAS trend, while others are stable or have decreased.	Based on the results obtained, which are consistent with the results obtained during the DSI Addendum (JBS&G 2024a), the PFAS plume in shallow wells is broader than in the upgradient plume although concentrations are similar. This is likely to be a result of plume dispersion (due to the distribution of clays and sands in the shallow zone) and/or variable discharge processes within the floodplain area. Based on review of the data, the OMP program would benefit from the inclusion of additional off-base wells to ensure the continued monitoring of this plume further down-gradient of the base boundary. It is considered that the inclusion of MW411 through MW415 would benefit the program. Proposed new monitoring locations have been shown on **Figures 9B.** With this improved monitoring between the base and the receptor, the sampling frequency of all on-base wells across East Bandiana can be reduced from biannual to annual.
MW351, MW352	Northwestern boundary of East Bandiana	The wells are located on the northwestern boundary of East Bandiana and identify concentrations flowing towards the Killara residential area. These wells also provide delineation of the Source Area 13 PFAS plume cross gradient to the north.	The analytical results have been consistent across all OMP sampling rounds, with sum of PFOS+PFHxS concentrations ranging from 0.01 to 0.1 µg/L. All results of which are below adopted criteria, with the exception of MW351 during the April 2024 sampling event, which exceeded PFAS NEMP 2025 Drinking Water criterion. This concentration had reduced to 0.047 µg/L in the following sampling round, which is below criteria.	These observations are consistent with the conceptual understanding of this portion of the base. No Source Areas were identified in this area of the base and the PFAS plume from Source Area 13 is located further to the south.
Shepparton and Coonambidgal Fluvium – Intermediate – On-base				
MW009, MW042, MW046_I	Northern boundary of East Bandiana	These wells are intended to assist in delineating the Source Area 13 plume in the intermediate zone of the aquifer.	MW009 and MW042 consistently recorded sum of PFOS+PFHxS concentrations in the range of approximately 7.0 to 20.0 µg/L, while MW046_I was approximately 2.5 to 5.5 µg/L. All concentrations across the sampling rounds exceed PFAS NEMP 2025 Recreational Water and Drinking Water criteria. Concentrations within all wells during the 2024 sampling rounds were slightly lower than historic OMP results.	The reported concentrations for MW009 and MW042 indicate they are close to the centre of the plume, with MW046_I located to the east with slightly reduced PFAS concentrations. The DSI Addendum (JBS&G 2024a) identified the intermediate zone at East Bandiana was continuous and had higher PFAS concentrations than the shallower aquifer which was discontinuous in parts. The OMP results are consistent with these conclusions.
Shepparton and Coonambidgal Fluvium – Deep – On-base				
MW350_D	Source Area 13	The sample location is positioned in Source Area 13 to identify PFAS concentrations in the deeper portion of the aquifer.	The analytical results have been consistent across all OMP sampling rounds, with sum of PFOS+PFHxS concentrations from 2024 ranging from 0.64 to 0.84 µg/L, while historically ranges have been between 0.53 and 0.73 µg/L. All results from this well exceed PFAS NEMP 2025 Drinking Water criterion.	The PFAS concentrations in the deep well in Source Area 13 are approximately two orders of magnitude less than those in the shallow well, which is consistent with the findings of the DSI Addendum (JSB&G 2024a) which identified low hydraulic conductivity clay layers between the wells in this portion of the base.

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Sample Location/s	Target Area	Monitoring Undertaken	Discussion of Results and Screening Criteria Exceedances	Rationale for Observed Results/Changes
MW046_D	Northern boundary of East Bandiana	The sample location is positioned in the northern portion of East Bandiana and is intended to assist in delineating the PFAS plume in the deep aquifer from Source Area 13.	The analytical results have been relatively consistent across all OMP sampling rounds, with sum of PFOS+PFHxS concentrations from 2024 ranging from 4.08 to 4.2 µg/L, while historically ranges have been between 2.77 and 5.5 µg/L. All results from this well exceed PFAS NEMP 2025 Recreational Water and Drinking Water criteria.	The PFAS concentrations in the deep aquifer are approximately the same as those in the overlying intermediate aquifer, which is consistent with the findings of the DSI Addendum (JSB&G 2024a) which identified interconnection between the aquifers in the northeastern portion of the base.
Shepparton and Coonambidgal Fluvium – Shallow – Off-base				
MW356, MW357	Kiewa River floodplain	The sample locations are positioned along the Kiewa River.	The analytical results have been consistent across all OMP sampling rounds, with Sum of PFOS+PFHxS concentrations from 2024 ranging from below LOR to 0.06 µg/L, while historically ranges have been between below LOR and 0.08 µg/L. All results from these wells are below adopted criteria, with the exception of MW357 from the May 2023 sampling round, which exceeded PFAS NEMP 2025 Drinking Water criterion.	The Kiewa River is a gaining stream (i.e. a waterway which receives groundwater), with the monitoring wells MW356 and MW357 showing very low PFAS concentrations discharging into the river from groundwater. It is noted that sampling of surface water in the Kiewa River at or downgradient of the wells has not identified PFAS concentrations above LOR (refer to **Table H.2**).
Other Aquifer – Off-base				
OTH019	Private Property	Groundwater location OTH019 represents a point of potential human health exposure in a private property where bore water is used for irrigation of home grown produce and stock watering (chickens).	The analytical results have been consistent across all OMP sampling rounds, although a slight increase has been identified with the most recent November/December 2024 sampling event. The sum of PFOS+PFHxS concentrations from 2024 ranged between 0.17 and 0.313 µg/L, while historically the range has been 0.13 to 0.22 µg/L. All results exceed PFAS NEMP 2025 Drinking Water criterion.	These concentrations are in the historical range that were taken into consideration as part of the HHERA (Golder 2020). As such the previously assessed risk level has not changed. Risk Management Actions from the PMAP (Defence 2020) result in regular sampling of this location and ongoing stakeholder engagement with the property owner to ensure current and potential risks relating to PFAS in groundwater are appropriately managed. Furthermore, with the PMAP program moving into a remediation phase during 2025, PFAS concentrations within the East Bandiana aquifer pathway will be subject to remediation, and therefore PFAS migration into off-base areas via groundwater will be reduced over the long term. The slight result increase identified in the November/December 2024 sampling round will continue to be monitored to understand any potential changes in PFAS risk.

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A detailed summary of the OMP surface water results in the context of the revised CSM is set out in the following table. Surface water sampling locations from the top of the catchment are presented first, followed by those further down the catchment and presented in groups targeting Source Areas or pathways. Surface water sampling locations are shown in **Figure 5A** and **5B**.

Table I.2: Interpretation of Surface Water OMR Results

Sample Location/s	Target Area	Monitoring Undertaken	Discussion of Results and Screening Criteria Exceedances	Rationale for Observed Results/Changes
Jack in the Box Creek Catchment – On-base				
SW302, SW307, SW310	Source Area 2	These sampling locations target Source Area 2 and the drainage channel which runs beside an internal road before converging with surface water from Source Area 1 and discharging off-base. All locations were sampled during the November/December 2024 sampling event, however very few samples were collected during previous sampling events.	SW302 and SW307 are both collected from immediately downgradient of Source Area 2, while SW310 is collected from further down the drainage pathway. The November/December 2024 sampling event was the first time SW302 has been sampled (as part of any program) and recorded a sum of PFOS+PFHxS concentration of 3.42 µg/L, which exceeds PFAS NEMP 2025 Drinking Water and Recreation Water criteria. Down hydraulic gradient location SW310, had a lower (order of magnitude) sum of PFOS+PFHxS concentration of 0.12 µg/L during the same event, which is in line with historic results ranging from 0.12 to 0.46 µg/L (all exceeding PFAS NEMP 2025 Drinking Water criterion). The November/December 2024 result from SW307 recorded a sum of PFOS+PFHxS concentration of 0.15 µg/L, which was also in line with historic results ranging from 0.17 and 0.25 µg/L (all exceeding PFAS NEMP 2025 Drinking Water criterion).	The collection of surface water results from Source Area 2 has been inconsistent, which is likely related to the steeper topography in this part of the base draining stormwater quickly away. The results obtained from SW307 and SW310 as part of the OMP are consistent with those from the Mass Flux Study (JBS&G 2024b), which did not identify Source Area 2 to be a key contributor to flux compared to other Source Areas. The results from SW302 however are slightly higher compared to the results of the Mass Flux Study (JBS&G 2024b) and will continue to be monitored to understand any potential changes in PFAS risk.
SW321, SW313, SW316, SW311	Source Area 1	These sampling locations target Source Area 1, including the off-base discharge point towards Jack in the Box Creek (SW311).	Sum of PFOS+PFHxS concentrations at SW311 have been decreasing, with the 2024 sampling events recording concentrations of 0.20 to 0.33 µg/L, compared with the historic range of 1.56 to 2.4 µg/L (2024 results exceed PFAS NEMP 2025 Drinking Water criterion, while historic results usually exceed PFAS NEMP 2025 Recreational and Drinking Water criteria). SW313 is collected from the earthen bund in Source Area 1, and a high sum of PFOS+PFHxS concentrations was identified during the November/December 2024 sampling round (31.3 µg/L), likely owing to soil disturbance inside the bund from environmental investigations during October 2024. Historic ranges for SW313 are between 3.33 and 6.1 µg/L, which exceed PFAS NEMP 2025 Recreational and Drinking Water criteria. 2024 sampling from SW316 and SW321 were stable and within historic ranges.	The results obtained as part of the OMP are consistent with the Mass Flux Study (JBS&G 2024b), which identified Source Area 1 to be a key contributor of PFAS to surface water, with order of magnitude increases to PFAS concentrations from surface water leaving Source Area 1, compared to surface water further upgradient (i.e. Source Area 2, see results in previous section). Recent further investigations of Source Area 1 (JBS&G 2025a) identified the combination of widespread low-concentration PFAS in soils across the Source Area and the flat, deeper clayey conditions of the soil across the area were considered to contribute to higher concentrations in surface water run-off. Source Area 1 will be the subject of upcoming remediation. It is proposed to treat surface soil across the Source Area, particularly targeting drainage channels, to reduce the migration of PFAS from soil into surface water.
SW336	Source Area 6	SW336 is collected from the Fire Training Area retention/recirculation pond.	The sum of PFOS+PFHxS concentrations from this location during the 2024 sampling rounds has ranged from 15.9 to 16.8 µg/L, with historic ranges being 5.21 to 8.18 µg/L. All results consistently exceed PFAS NEMP 2025 Recreational and Drinking Water criteria.	The concentrations identified during the OMP sampling events are consistent with surface water and run-off water concentrations identified during the DSI (Golder 2018) and DSI Addendum (JBS&G 2024a). The facility hardstand contains PFAS which leaches into surface water during rainfall and is carried into the settling pond. It is noted however that the Fire Training Area is a closed system, with the base waste contractor pumping out and appropriately disposing the wastewater from the facility. It is noted that Source Area 6 will be subject to remediation works during 2025, which will consist of demolition of the current infrastructure (including the settling pond) and targeted soil treatment to reduce PFAS migration.
SW338, SW333	Source Area 5	These sample locations both relate to Source Area 5, with SW338 being located within the pond in the facility, while SW338 targets a drainage channel which flows west towards Jack in the Box Creek.	The sum of PFOS+PFHxS concentrations from SW333 during the 2024 sampling rounds has ranged from 0.69 to 1.77 µg/L, with historic ranges being 0.13 to 0.84 µg/L. All results consistently exceed PFAS NEMP 2025 Drinking Water criterion. The sum of PFOS+PFHxS concentrations from SW338 during the 2024 sampling rounds has ranged from 0.81 to 1.13 µg/L, with historic ranges being 0.70 to 1.31 µg/L. All results consistently exceed PFAS NEMP 2025 Drinking Water criterion.	Results are consistent with historical data from the DSI (Golder 2018).
SW448, SW326,	South Bandiana drainage	These sample locations are positioned on the main stormwater channel which collect surface	For the OMP sampling events, all results from these sampling locations have been relatively consistent with historical results, with the	The results are consistent with the findings of the DSI Addendum (JBS&G 2024a) and Mass Flux Study (JBS&G 2024b). These reports identified that both Source Area 6 and 7 are key contributors to PFAS in

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Sample Location/s	Target Area	Monitoring Undertaken	Discussion of Results and Screening Criteria Exceedances	Rationale for Observed Results/Changes
SW332, SW324, SW323, SW322	pathway between Source Areas and base boundary	water from Source Area 5, 6 and 7 and drain it towards Jack in the Box Creek. SW322 is representative of water conditions as it leaves base.	exception of SW326 and SW332. The majority of the sample locations within this sub-catchment exceeded PFAS NEMP 2025 Recreational and Drinking Water criteria, including SW322 on the base boundary.	surface water, which is why PFAS concentrations are being observed higher in the catchment (i.e. SW448 and SW326). As the catchment is not large and does not receive water from off-base areas, there is not a significant amount of dilution occurring across the sub-catchment, which sees PFAS concentrations remaining relatively similar across the sub-catchment. Both SW326 and SW332 reported PFAS concentrations increases during the OMR – 2021, 2022 and 2023 (JBS&G 2025b). In 2024, the concentrations in SW326 fluctuated, while SW332 continued to increase. For SW326, the 2024 concentrations ranged from 0.43 µg/L to 3.14 µg/L for sum of PFOS+PFHxS, with order of magnitude changes in concentration identified on four occasions over the seven sampling rounds. For SW332, the first three sampling rounds from 2021-2022 reported concentrations of sum of PFOS+PFHxS between 0.01 and 0.1 µg/L, which then increased at an order of magnitude to 4.3 µg/L in October 2023, and another order of magnitude to 22.6 µg/L. JBS&G notes that these increases were not identified in the downgradient sample locations during the OMP, which remained consistent with previous rounds. As SW326 and SW332 are located in separate sub-catchments, the cause of the changes in concentration are considered unlikely to be Source Area related and may be the result of climatic and/or flow conditions. Both locations will continue to be monitored to understand any potential changes in PFAS risk.
Jack in the Box Creek Catchment – Off-base				
SW463, SW424, SW427	Upper portion of Jack in the Box Creek Catchment	SW463 and SW424 represent conditions immediately off-base in the Jack in the Box Creek catchment, with SW427 being further downstream.	All sampling location results have been relatively consistent across the sampling rounds, with the locations immediately adjacent the base boundary ranging from below LOR to 2.35 µg/L for sum of PFOS+PFHxS, while SW427 further downstream ranges between 0.03 and 0.53 µg/L. The majority of results exceed PFAS NEMP 2025 Drinking Water criterion, with one sample from SW463 just exceeding PFAS NEMP 2025 Recreational Water criterion. Sum of PFOS+PFHxS concentrations from the 2024 sampling rounds has been lower than previous sampling rounds, with concentrations ranging from below LOR to 1.93 µg/L.	The results of SW424 and SW463 are considered consistent with the findings of the Mass Flux Study (JBS&G 2024b) and the knowledge of the Source Areas related to each of the respective sub-catchments. It is observed that SW427 is an order of magnitude lower in PFAS concentrations than SW424 and SW463, which is reflective of the distance of this location from the base and dilution in the off-base stormwater system.
SW430, SW431, SW432, SW434	Lower portion of Jack in the Box Creek Catchment	These sampling locations are representative of the lower reaches of Jack in the Box Creek catchment, with SW434 representing the confluence between Jack in the Box Creek and Wodonga Creek.	All sampling location results have been relatively consistent across the sampling rounds, with sum of PFOS+PFHxS concentrations ranging from below LOR to 0.19 µg/L, which indicates around half the results just exceeding PFAS NEMP 2025 Drinking Water criterion. 2024 results ranged from below LOR to 0.17 µg/L.	As seen with the samples above (SW424, SW427 and SW463), there is a trend of decreasing PFAS concentrations with distance from the base, with SW434 at the discharge point of the Jack in the Box Creek, having all results consistently below PFAS NEMP 2020 Drinking Water criterion.
Kiewa River Catchment – On-base				
SW340	Source Area 5	This sample location represents surface water drainage downgradient of the western portion of Source Area 5.	For all OMP sampling events, results have fluctuated slightly ranging from 0.91 to 5.86 µg/L for sum of PFOS+PFHxS (2024 results ranged from 2.49 to 4.47 µg/L), however all are below historical results from the DSI (Golder 2018) of 6.80 µg/L during 2017.	The results are consistent with the Mass Flux Study (JBS&G 2024b), which identified that Source Area 5 contributed higher PFAS concentrations to surface water compared to other Source Areas.
SW346, SW349, SW355	Ornamental ponds along northern boundary of South Bandiana	The three sample locations are positioned in three of the main ornamental ponds located on the main drainage pathway between Source Area 5 and North Bandiana.	For all OMP sampling events, results from these locations have remained consistent, with sum of PFOS+PFHxS ranging from 0.13 to 1.56 µg/L, which indicate all samples exceed PFAS NEMP 2025 Drinking Water criterion. 2024 results ranged from 0.28 to 1.56 µg/L.	A distinct decrease can be seen in the data from the upstream pond (SW346) to the downstream ponds (SW349 and SW355), with almost an order of magnitude change. This is consistent with the findings of the Mass Flux Study (JBS&G 2024b) which identified decreasing surface water concentrations between Source Area 5 and the base boundary.
SW370, SW374, SW375	Main drainage channel of North Bandiana	The three sample locations are positioned along the main drainage channel of North Bandiana (which also collects surface water from South Bandiana), with SW375 representing conditions as water leaves the base.	For all OMP sampling events, results from these locations have remained consistent, with sum of PFOS+PFHxS ranging from 0.06 to 0.3 µg/L, which indicate most samples exceed PFAS NEMP 2025 Drinking Water criterion. 2024 results ranged from 0.06 to 0.16 µg/L.	Consistent with the findings of the Mass Flux Study (JBS&G 2024b), surface water concentrations have continued to decrease in this area compared with results from further upstream. This is because there are no Source Areas with contribute PFAS concentrations to surface water within this portion of the base.
SW379, SW380	Source Area 13	Both sample locations are positioned in surface water drainage locations surrounding Source Area 13.	The presence of surface water to be sampled at these locations has been a challenge during OMP sampling events, with only around half of the planned samples collected. This is consistent with the findings of the DSI Addendum (JBS&G 2024a) which identified sandy soils in the area which drain water quickly.	The results are also consistent with the DSI Addendum (JBS&G 2024a) which identified that most of the Source Area has been developed, resulting in widespread hardstand across the area which prevents PFAS contributing to the surface water pathway.

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Sample Location/s	Target Area	Monitoring Undertaken	Discussion of Results and Screening Criteria Exceedances	Rationale for Observed Results/Changes
			Of the samples which were collected, results from these locations have remained relatively consistent and in line with historical results, with all sum of PFOS+PFHxS results ranging from 0.11 to 0.92 µg/L, all of which exceed PFAS NEMP 2025 Drinking Water criterion. 2024 results ranged from 0.09 to 0.92 µg/L.	
SW382	Sediment pond East Bandiana	SW382 is collected from a stormwater retention basis in the northwestern portion of the base.	For all OMP sampling events, including those from 2024, sum of PFOS+PFHxS results were consistently below the LOR.	As per the Mass Flux Study (JBS&G 2024b), stormwater is not considered a key PFAS migration pathway for East Bandiana, given the pathway where SW382 is situated (the western outlet) is the less PFAS affected of the two East Bandiana surface water outlets (the eastern outlet receives stormwater from Source Area 13). This is also the likely reason SW382 had sampling results consistently below the LOR.
SW387, SW388	Eastern drainage pathway from East Bandiana	Both sample locations are positioned on the eastern drainage pathway between East Bandiana and the discharge point at the Kiewa River.	For all OMP sampling events, results from these locations have remained consistent, with sum of PFOS+PFHxS results ranging from below LOR to 0.48 µg/L, resulting in the majority of samples exceeding PFAS NEMP 2025 Drinking Water criterion. Results from the 2024 sampling events ranged from 0.02 to 0.33 µg/L.	The results are considered consistent with the DSI Addendum (JBS&G 2024a) and Mass Flux Study (JBS&G 2024b) which did not find surface water to be a primary pathway for PFAS flux for East Bandiana. Furthermore, these documents identified a direct link between this surface water discharge point and surface water at Source Area 13. It is noted that the concentrations between OMP sample locations from the two areas are comparable.
Kiewa River Catchment – Off-base				
SW409, SW412, SW462	Unnamed creek and associated oxbows – Northern and Central Pastoral Areas	These sample locations are positioned along the unnamed creek, in and down-gradient of the residential development of Killara. The locations receive surface water flow which exits North Bandiana.	All sampling location results have been relatively consistent across the sampling rounds, with sum of PFOS+PFHxS results ranging from 0.01 to 0.42 µg/L. Just under half the results just exceed PFAS NEMP 2025 Drinking Water criterion, with the balance being just below. Results from the 2024 sampling events ranged from 0.02 to 0.08 µg/L.	Results are in line with historic data from the DSI (Golder 2018). Results from the off-base portion of unnamed creek are at similar concentrations or lower than the results which exist the base at North Bandiana.
SW403, SW405	Oxbows – Central Pastoral Area	SW403 and SW405 are sampled from oxbow lakes within the Central Pastoral Area.	All sampling location results have been relatively consistent across the sampling rounds, with sum of PFOS+PFHxS results ranging from 0.04 to 0.95 µg/L, resulting in the majority of results just exceeding PFAS NEMP 2025 Drinking Water criterion. Results from the 2024 sampling events ranged from 0.2 to 0.35 µg/L.	It is considered likely that these oxbows receive some surface water flow from oxbows in the Southern Pastoral Area, resulting in higher PFAS concentrations compared with the immediately adjacent Kiewa River or the neighbouring unnamed creek.
SW395, SW396, SW397, SW400, SW401, SW470, SW471, SW487	Oxbows – Southern Pastoral Area	These sampling locations are positioned across the Kiewa River floodplain in the Southern Pastoral Area.	For all OMP sampling events, results from these locations have remained relatively consistent, with SW397 and SW487 exhibiting the highest concentrations, sum of PFOS+PFHxS results ranging from 6.16 to 12.2 µg/L, while the balance of locations ranged from 0.06 to 5.2 µg/L. Results from the 2024 sampling events are in line with those from previous sample events, although the highest sum of PFOS+PFHxS concentration was identified in several locations (SW396, SW471 and SW487) during 2024 compared with previous years. 2024 has had the lowest rainfall recorded compared to any other year that OMP sampling has occurred. This may have resulted in the drying and shrinkage of many of the oxbows, increasing the PFAS concentrations in surface waters. It is appreciated that the oxbows sampled are used for livestock watering, and the results remain consistent with results and assumptions considered as part of the HHERA (Golder 2020). The risk through this exposure pathway therefore remains low and acceptable.	The results obtained as part of the OMP, are consistent with the conceptual understanding of this area developed through the DSI Addendum (JBS&G 2024a) and the Mass Flux Study (JBS&G 2024b). These documents identified a relatively continuous sandy zone across East Bandiana which is considered likely to directly intercept the oxbow (SW487 and SW397 samples). This direct pathway is the cause of the PFAS at this oxbow being higher than in other oxbows in the floodplain. While other oxbows are likely to also receive groundwater discharge from this aquifer, the pathway connection is not as significant (i.e. the SW487/SW397 oxbow has been deepened) and the other oxbows are a greater distance from the base boundary, resulting in lower PFAS concentrations. The above identified groundwater pathway will be the target of upcoming remediation. It is proposed to install a groundwater extraction and treatment system along the boundary of East Bandiana to reduce the migration of PFAS into off-base areas via groundwater. Over time, this will see the reduction of PFAS in oxbows in the Kiewa River floodplain.
SW390	Kiewa River – upstream	This location represents background concentrations in the Kiewa River as it is positioned both upgradient of the base and the North East Region Water Corporation WTP.	For all OMP sampling events, results have consistently been below the LOR for this location.	This finding is consistent with the conceptual understanding of the area, with limited to no PFAS sources being known in the up-stream areas of the Kiewa River.
SW393	Middle Creek, close to Kiewa River confluence	SW393 is located within Middle Creek and represents potential contributions from the Middle Creek catchment.	For all OMP sampling events, results have consistently been below the LOR for this location.	This finding is consistent with the conceptual understanding of the area, with limited to no PFAS sources being known in the up-stream areas of Middle Creek.
SW398, SW404, SW416	Kiewa River – Management Area	These sample locations represent the Kiewa River along the length of the waterway which is covered by the Management Area.	For all OMP sampling events including those from 2024, results have consistently been below the LOR for all locations, with the exception of SW398 during the October 2022 event, which had a concentration of	Stantec did not provide comment for the concentration above the LOR for the October 2022 sampling event, however recent flooding in the area may have contributed, although this was not identified in any of the other sampling results from the Kiewa River during this time.

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Sample Location/s	Target Area	Monitoring Undertaken	Discussion of Results and Screening Criteria Exceedances	Rationale for Observed Results/Changes
			0.08 µg/L for sum of PFOS+PFHxS, which exceeds PFAS NEMP 2025 Drinking Water criterion.	

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A detailed summary of the OMP sediment results in the context of the revised CSM is set out in the following table. Sediment sampling locations from the top of the surface water catchment are presented first, followed by those further down the catchment. Sediment sampling locations are shown in **Figure 5A** and **5B**.

Table I.3: Interpretation of Sediment OMR Results

Sample Location/s	Monitoring Locations	Discussion of Results and Rationale for Observed Results/Changes
Jack in the Box Creek catchment (on and down-gradient from South Bandiana)		
SD463	SD463 is located on what is considered a critical surface water pathway for PFAS leaving the base, receiving PFAS affected surface water from Source Area 1 which has results which exceed PFAS NEMP 2025 Recreational Water and Drinking Water criteria, as identified in the Mass Flux Study (JBS&G 2024b).	The sediment sample concentrations recorded at SD463 are considered to reflect this position of being immediately downgradient of Source Area 1, with the sum of PFOS+PFHxS concentrations of 0.0088 mg/kg (May 2022), 0.0051 mg/kg (May 2023) and 0.0097 mg/kg (April 2024) being relatively higher than other results from other areas both on and off-base which are located further from Source Areas. The results are consistent with that recorded during the DSI (Golder 2018) with a sum of PFOS+PFHxS concentration of 0.0056 mg/kg.
SD323	SD323 is located on the base boundary for the drainage pathway which collects surface water from both Source Areas 6 and 7. While surface water concentrations are lower at this location compared to SD463, the Mass Flux Study (JBS&G 2024b) still highlights that it is a primary surface water pathway for PFAS.	The sediment sample concentrations recorded at SD323 is considered to reflect this position of receiving surface water flow from key Source Areas, with the sum of PFOS+PFHxS concentrations of 0.0173 mg/kg (May 2022), 0.0137 mg/kg (May 2023) and 0.0217 mg/kg (April 2024) being relatively higher than other results from other areas both on and off-base which are located in less critical pathways. The results are slightly lower than that recorded during the DSI (Golder 2018) with a sum of PFOS+PFHxS concentration of 0.0342 mg/kg.
SD424	SD424 is located further downstream than SD463, but before the confluence with surface water from Source Area 1 (represented by SD323).	The sediment sample concentrations recorded at SD424 were slightly lower than those recorded at SD463, with the sum of PFOS+PFHxS concentrations of 0.0041 mg/kg (May 2022), 0.0035 mg/kg (May 2023) and 0.0150 mg/kg (April 2024), which reflects its greater distance from Source Areas. It is also noted that SD424 is collected from a concrete culvert, which would likely increase the flow of water and enable sediment to be scoured further downstream rather than accumulating. The results are lower than that recorded during the DSI (Golder 2018) when a sum of PFOS+PFHxS concentration of 0.0596 mg/kg was obtained.
Kiewa River catchment (on and down-gradient from South Bandiana and North Bandiana)		
SD346	SD346 is located immediately downgradient from Source Area 5, another area that the Mass Flux Study (JBS&G 2024b) highlighted as generating PFAS affected surface water which exceed PFAS NEMP 2025 Recreational Water and Drinking Water criteria.	The sediment sample concentrations recorded at SD463 are considered to reflect this position of being immediately downgradient of Source Area 5, with the sum of PFOS+PFHxS concentrations of 0.0041 mg/kg (May 2022), 0.0114 mg/kg (May 2023) and 0.0037 mg/kg (April 2024) being relatively higher than results from other areas on and off-base which are located further from Source Areas. The results are consistent with that recorded during the DSI (Golder 2018) with a sum of PFOS+PFHxS concentration of 0.0161 mg/kg.
SD355	SD355 is located at the end of three ornamental ponds, compared to location SD346 above, which is at the start of the ponds.	The sediment sample concentrations recorded at SD355 were 0.0010 mg/kg (May 2022), 0.0011 mg/kg (May 2023) and 0.0010 mg/kg (April 2024) for sum of PFOS+PFHxS. It is evident that surface water and sediment PFAS concentrations may be reduced by the presence of the ornamental ponds within the drainage pathway. The results are lower than that recorded during the DSI (Golder 2018) when a sum of PFOS+PFHxS concentration of 0.0128 mg/kg was obtained.
SD375	SD375 is located at the point where surface water leaves the North Bandiana base.	The sediment sample concentrations recorded at SD375 were 0.0044 mg/kg (May 2022), 0.0032 mg/kg (May 2023) and 0.0032 mg/kg (April 2024) for sum of PFOS+PFHxS. While North Bandiana does not have Source Areas which could greatly contribute to PFAS surface water concentrations, it does receive surface water from the eastern portion of South Bandiana, which could contribute to slightly higher concentrations than SD355. The results are lower than that recorded during the DSI (Golder 2018) when a sum of PFOS+PFHxS concentration of 0.0118 mg/kg was obtained.
SD412	SD412 is located close to the end of the unnamed creek, east of the residential development of Killara.	The sediment sample concentrations recorded at SD412 were 0.0014 mg/kg (May 2022), 0.0020 mg/kg (May 2023) and 0.0024 mg/kg (April 2024) for sum of PFOS+PFHxS. As there are no PFAS sources between SD412 and SD375 and the distance between the two sample locations is approximately 1.2 km, it is considered appropriate that the PFAS results are approximately half that of SD375. The results are lower than that recorded during the DSI (Golder 2018) when a sum of PFOS+PFHxS concentration of 0.0038 mg/kg was obtained.
Kiewa River catchment (on and down-gradient (i.e. Kiewa River floodplain) from East Bandiana)		
SD382	SD382 is collected from a stormwater retention basis in the northwestern portion of East Bandiana.	Stormwater is not considered a key PFAS migration pathway for East Bandiana, with the pathway SD382 is situated on (the western outlet) being the lesser PFAS affected pathway of the two East Bandiana surface water outlets (the eastern outlet receives stormwater from Source Area 13). This is likely the reason behind low LOR concentrations at SD382 during May 2022, May 2023 and April 2024. The results are lower than that recorded during the DSI (Golder 2018) when a sum of PFOS+PFHxS concentration of 0.0011 mg/kg was obtained.
SD397	SD397 is located in the oxbow that is understood to be in direct connection to the Shepparton and Coonambidgal Fluvium intermediate aquifer and as such generally has the highest PFAS surface water concentration of all the Kiewa River floodplain oxbows.	It is this PFAS surface water presence and the static nature of the water body, that has likely resulted in the sum of PFOS+PFHxS concentrations of 0.0442 mg/kg (May 2022), 0.0861 mg/kg (May 2023) and 0.0633 mg/kg (April 2024) being relatively higher than other results from other areas both on and off-base which are located further from Source Areas. The results are consistent with that recorded during the DSI (Golder 2018) with a sum of PFOS+PFHxS concentration of 0.0527 mg/kg.
SD395, SD396 and SD400	SD395, SD396 and SD400 are located in other oxbows across the Kiewa River floodplain.	These oxbows are not likely connected to groundwater (or at least to the same extent as the oxbow from which SW397 is sampled), although the oxbow which SD400 is collected from receives stormwater from the northern portion of East Bandiana, which has very low levels of PFAS. Concentrations in SD395, SD396 and SD400 are all lower than in SD397, with results as follows: • SD395: Sum of PFOS+PFHxS concentrations of 0.0020 mg/kg (May 2023) and 0.0044 mg/kg (April 2024) (not sampled in May 2022), and 0.0016 mg/kg and 0.0033 mg/kg during the DSI (Golder 2018) and HHERA (Golder 2020) respectively;

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Sample Location/s	Monitoring Locations	Discussion of Results and Rationale for Observed Results/Changes
		• SD396: Sum of PFOS+PFHxS concentrations of 0.0373 mg/kg (May 2022), 0.0223 mg/kg (May 2023), 0.0408 mg/kg (April 2024), 0.0162 mg/kg during the DSI (Golder 2018) and 0.0545 mg/kg during the HHERA (Golder 2020); and • SD400: Sum of PFOS+PFHxS concentrations of 0.0059-0.0144 mg/kg (May 2022), 0.0193 mg/kg (May 2023), 0.0210 mg/kg (April 2024), 0.0031 mg/kg during the DSI (Golder 2018) and 0.0092 mg/kg during the HHERA (Golder 2020).

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