

TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	B06.0120220330114721_03	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001_01</u>
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1. Motherhub Summary

Source TBM/Bin at Pivot	1	Source Geological Domain	1
Approx. Source Tunnel Chainage From	150	Approx. Source Tunnel Chainage To	160
Approx. Rings From	64	Approx. Rings To	68
Foaming Agent	TamSoil 287AC	Water Source	Potable (City West Water)
For BSF Holding Bay No:	B06.01	Start of Filling From (Time / date)	15/03/2022
Tonnes Put in Holding Bay No:	7540.5	Finish of Filling (Time / Date)	16/03/2022
Classified Volume (LCM)	4000	Spoil Classification Decision	NPIW Containment
Sampling Ratio (samples per LCM)	1: 250	Approx. Bank Cubic Meters (BCM)	1912.11

2. Agon Spoil Classification Decision

Spoil Categorisation Decision (State Yes or No in each Row)	
NPIW Containment - 2020/476 (SO 9042848)	Yes
NPIW Landfill - 2019/404 (SO 9038429)	Yes
PIW-Category C - 2019/405 (SO 9038560)	No
PIW-Category B - 2019/406 (SO 9038561)	No
PIW-Category A	No

3. Agon Spoil Classification Assessment

3.1 Applicable Samples

Table 3.1 - 1 lists the applicable sample numbers for this spoil. These have been determined from:

- The date / time bay filling was started
- The date / time bay filling was finished
- The ID of the first truck that deposited spoil in the bay and the date / time that it was filled at Pivot
- The ID of the last truck that deposited spoil in the bay and the date / time it was filled at Pivot
- The sample ID that was associated with the first truck – noting that a time window to be associated with each sample is half the time interval between its sampling time and the time of the preceding and the following samples. For example, if samples were collected at 8am, noon and 4 pm, the time window for the noon sample is between 10 am and 2 pm. That is this sample “belongs” to all truck loaded in this time window

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Table 3.1 - Applicable Sample ID's

Table 3.1 - 1 Applicable Sample ID's

Applicable Spoil Sample ID's		
SX_OB_20220315_07_58_SS_Primary_EUF	SX_OB_20220315_15_56_SS_Primary_EUF	SX_OB_20220316_00_04_SS_Primary_ALS
SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_15_57_SS_Duplicate_EUF	SX_OB_20220316_00_08_SS_Primary_EUF
SX_OB_20220315_08_05_SS_Duplicate_ALS	SX_OB_20220315_15_58_SS_Triplicate_ALS	SX_OB_20220316_04_11_SS_Primary_ALS
SX_OB_20220315_08_06_SS_Triplicate_EUF	SX_OB_20220315_16_10_SS_Primary_ALS	SX_OB_20220316_04_23_SS_Primary_EUF
SX_OB_20220315_11_50_SS_Primary_ALS	SX_OB_20220315_20_53_SS_Primary_ALS	
SX_OB_20220315_11_56_SS_Primary_EUF	SX_OB_20220315_20_54_SS_Primary_EUF	
Total Sample Numbers	16	Ratio Acceptable
Primary Sample Numbers	12	Yes
Classified Volume (LCM)	4000 m ³	
Volume: Sample Number Ratio (Samples per LCM)	1: 250	

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3.2 Data Quality Compliance with SAQP

Table 3.2-1 evaluates the compliance of the data quality for this spoil – by reference to the criteria in the SAQP (Yes / No).

Table 3.2 - 1 Evaluation of Quality of Data for this Spoil

DQI	Field Consideration	Laboratory Consideration	Overall Data Quality Acceptability
Precision	Yes	Yes	Yes
Accuracy	Yes	Yes	Yes
Representativeness	Yes	Yes	Yes
Completeness	Yes	Yes	Yes
Comparability	Yes	Yes	Yes

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3.3 Selection of the Spoil Sample Testing Regime

Table 3.3 - 1 Selection of the Spoil Sample Testing Regime

	(State Yes or No in each Row)
<p>A. Is testing all spoil samples taken required for spoil in this Holding Bay, because prior to this Holding Bay, less than 10 Holding Bays of spoil have been tested from this Domain</p> <p>If the answer is Yes, go to E. If the answer is No, go to B.</p>	Yes
<p>B. If the answer to A is No (i.e., 10 or more Holding Bays of spoil have been tested from this Domain), do trends in the maximum data values from the previous 10 bays indicate that results are trending at <75% of the containment criteria?</p> <p>If the answer is Yes, go to C. If the answer is No, go to D.</p>	NA
<p>C. If the answer to B is Yes, then was testing of spoil for this Holding Bay reduced to two primary samples per bay plus QC samples (Minimum Testing Regime) as allowed by the SAQP (See SAQP Section 6.2.7)?</p>	NA
<p>D. If the answer to B is No, then was the default testing regime implemented for all samples collected for the spoil in this Holding Bay (as required by the SAQP)?</p>	NA
<p>E. Based on the answers to Questions A to D above, was the default testing regime (as defined in the SAQP) applied to the spoil in this Holding Bay?</p>	Yes
<p>F. Based on the answers to Questions A to D above, was the Minimum testing Regime (as defined in the SAQP) applied to the spoil in this Holding Bay?</p>	No

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3.4 Spoil Compliance with SAQP Criteria for Containment Cell

Table 3.4 - 1 Spoil Compliance with SAQP Criteria for Containment Cell

Need for IWRG 621.1 or 655.1 Testing	
A. Is Spoil in this Holding Bay from a Zone of Exception or Anomalous and required testing for IWRG 621.1?	No
B. Is IWRG 621.1 testing required for spoil in this Holding Bay, because prior to this Holding Bay, less than 10 Holding Bays of spoil have been tested from this Domain?	Yes
C. Is IWRG 621.1 testing required for spoil in this Holding Bay, because the moving 95% UCL values for the previous 10 consecutive Holding Bays of spoil from this Domain are not below TCO ?	No
D. Is testing pursuant to IWRG 655.1 required for spoil in this Holding Bay, because the spoil comes from Exception Zone 3 (See SAQP Section 5.4) ?	No
E. Has spoil testing for IWRG 621.1 Parameters been triggered by results of spoil water tests for previous Holding Bays of spoil from this geological domain?	No
Outcome from IWRG 621.1 testing (if needed)	
F. If Yes to one or more Questions A, B, C or E, (and not NOC< applicable background concentrations) then do test results for IWRG 621.1 (see Table 3.4-2) prohibit NPIW Containment as a spoil Classification Outcome? If no to all of Questions A, B, C and E, then respond NA to this question.	No
Outcome from IWRG 655.1 testing (if needed)	
G. If Yes to Questions D, then do test results for IWRG 655.1 (see Table 3.4-3) permit NPIW Containment as a spoil Classification Outcome? If no to Question D, respond NA to this question	NA
Outcome from PFAS Testing	
H. Do test results for PFAS (see Table 3.4-4 below) permit NPIW Containment as a spoil Classification Outcome?	Yes
<i>If Yes to either or both of Question E or F, then Spoil is Not Suitable for Containment; Go to Section 3.5. Otherwise, it is Suitable for Containment</i>	
Notes:	
1. Criteria taken from EPA Grandfathered Classifications for TBM Spoil (2020/476(SO 9042848)), and from the EPA approved EMP for Hi Quality's Containment Cell	

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Table 3.4 - 2 IWRG 621.1 Parameter Concentration Statistics & Spoil Suitability for Containment

IWRG 621.1 Exceedance Test Results											
Chemical	Unit	LOR	No. of primary samples	Sample: LCM Ratio	No > LOR	Min	Mean	95% UCL on Mean	Max	Limiting Criteria for NPIW Containment	Comment
Arsenic	mg/kg	2	12	1: 250	12	24	27.58	29.18	33	20	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Nickel	mg/kg	5	12	1: 250	12	120	165.3	184.5	230	60	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)

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Table 3.4 – 3 IWRG 655.1 (WASS) Parameter Concentration Statistics & Spoil Suitability for Containment

IWRG 655.1 Test Results											
Chemical	Unit	LOR	No. of primary samples	Sample: LCM Ratio	No > LOR	Min	Mean	95% UCL on Mean	Max	Limiting Criteria for NPIW Containment	Comment
pHF	pH									5	
pHFox	pH									5	
Delta pH										2	
%S	%									0.03%	
Mol H+ /tonne	Mol/tonne									18	

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Table 3.4 - 4 PFAS Parameter Concentrations & Spoil Suitability for Containment

PFAS Test Results										
Chemical	Unit	LOR	No. of primary samples	No > LOR	Min	Mean	95% UCL on Mean	Max	Upper Limiting Criteria for NPIW Containment	Spoil Category for PFAS
Total PFAS Concentrations										
Total PFOS	ug/kg	5	12	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFOA	ug/kg	5	12	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFHxS	ug/kg	5	12	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
ASLP (pH= 5) PFAS Concentrations										
PFOA	ug/L	0.01	12	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS + PFHxS	ug/L	0.01	12	0	N/A	N/A	N/A	<0.01	7	NPIW-Containment
ASLP (pH= 7) PFAS Concentrations										
PFOA	ug/L	0.01	12	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS + PFHxS	ug/L	0.01	12	0	N/A	N/A	N/A	<0.01	7	NPIW-Containment

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3.5 Waste Classification for Spoil Not Suitable for Containment Cell

This Section 3.5 and the Tables 3.5-1 to 3.5-3 only apply if the spoil is classified in Section 3.4 as not suitable for the Containment Cell. If the spoil is classified in Section 3.4 as not suitable for the Containment Cell, then Tables 3.5-1 and 3.5-2 contain no data and no assessment.

Table 3.5 - 1 below contains the statistics for IWRG 621.1 Parameter concentrations, and Agon's assessment of their implications for the spoil waste category

Table 3.5 - 2 below contains the statistics for IWRG 655.1 Parameter concentrations, and Agon's assessment of their implications for the spoil waste category

Table 3.5 - 3 below contains the statistics for PFAS concentration, and Agon's assessment of their implications for the spoil waste category

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Table 3.5 – 1 IWRG 621.1 Parameter Concentration Statistics & Waste Classifications

IWRG 621.1 Exceedance Test Results													
Chemical	Unit	LOR	No. of primary samples	Sample: LCM Ratio	No > LOR	Min	Mean	95% UCL on Mean	Max	Limiting Criteria for NPIW	Limiting Criteria for Cat C	Limiting Criteria for Cat B	Comment
Arsenic	mg/kg												
Copper	mg/kg												
Chromium (Hexavalent)	mg/kg												
Nickel	mg/kg												
Fluoride	mg/kg												

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Table 3.5 – 2 IWRG 655.1 (WASS) Parameter Concentration Statistics & Waste Classification

IWRG 655.1 Test Results											
Chemical	Unit	LOR	No. of primary samples	Sample: LCM Ratio	No > LOR	Min	Mean	95% UCL on Mean	Max	Limiting Criteria for NPIW Containment	Comment
pHF	pH									5	
pHFox	pH									5	
Delta pH										2	
%S	%									0.03%	
Mol H+ /tonne	Mol/tonne									18	

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Table 3.5 - 3 PFAS Parameter Concentrations and Waste Classifications

PFAS Test Results													
Chemical	Unit	LOR	No. of primary samples	No > LOR	Min	Mean	95% UCL on Mean	Max	Upper Limiting Criteria for NPIW Containment	Upper Limiting Criteria for NPIW Landfill	Upper Limiting Criteria for PIW Cat C	Upper Limiting Criteria for PIW Cat B	Spoil Category for PFAS
Total PFAS Concentrations													
Total PFOS	ug/kg												
Total PFOA	ug/kg												
Total PFHxS	ug/kg												
ASLP (pH= 5) PFAS Concentrations													
PFOA	ug/L												
PFOS+PFHxS	ug/L												
ASLP (pH= 7) PFAS Concentrations													
PFOA	ug/L												
PFOS+PFHxS	ug/L												

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4. Comments and Limitations

Comments and Limitations	
1.	<p>Naturally Occurring Chemicals listed in IWRG 621.1 that are within the Background range despite being reported at concentrations that would otherwise categorise the material as PIW comprise:</p> <ol style="list-style-type: none"> 1. Technical discussion around the naturally occurring metal concentrations found in soils beneath the WGTP is detailed in <i>Golder (2017b) – Technical Report B, Appendix E – Environmental characterisation of spoil (natural soil and rock)</i>. The report indicates that elevated metals (including arsenic, nickel, copper, chromium (CrVI), zinc and mercury) were considered to be associated with natural enrichment instead of anthropogenic contamination. <ol style="list-style-type: none"> a. Arsenic – <i>Golder (2017b) – Technical Report B, Appendix E</i> section 6.2 <i>Arsenic enrichment in the residual soil of the upper Older Volcanics (Tvo1)</i> found that while the soil of the upper Older Volcanics sub-unit contains arsenic, the arsenic is not characteristic of the wider sub unit (i.e the rock) or the lower sub-unit (soil or rock). The concentration of arsenic therefore appears to be related to the chemical and biological weather of the unit over time. This is further supported by: <ol style="list-style-type: none"> i. The residual soil of the sub-unit being characterised by iron-oxide staining and containing goethite. Goethite is an iron oxyhydroxide mineral, which can contain elevated concentrations of arsenic. <p>Golder therefore concluded that based on the broad vertical distribution of arsenic and the presence of arsenic throughout the greater project area, arsenic results in Upper Older Volcanics soil are not likely to be associated with anthropogenic contamination.</p> b. Nickel – <i>Golder (2017b) – Technical Report B, Appendix E</i> section 6.3 <i>Nickel enrichment within the upper Older Volcanics</i> found that <ol style="list-style-type: none"> i. Nickel is known to be enriched within olivine and pyroxene basalt minerals, leading to nickel enrichment of soils weathered from basalt (Martini and Chesworth, 2013). ii. The reported mean nickel concentrations within the Older Volcanics were comparable to results reported within soils derived from basalt in Auckland and basalt rock of Finland (ARC, 2001; Koljonen, 1992), Older Volcanics observed in the Melbourne Metro Project (Golder, 1026a) and Newer Volcanics basalt of the Westenra Plains (Birch, 2003). iii. Enriched nickel concentrations corresponded with enriched cobalt (all units) and iron (except Tvo2 soil) indicating that the nickel is likely associated with geochemical enrichment rather than added contamination. iv. Enriched nickel concentrations also corresponded with enriched copper (Tvo2 soil and rock) and zinc (all units) indicating that the nickel is likely associated with geochemical enrichment rather than added contamination.

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	<p>Golder therefore concluded that the nickel is likely associated with geochemical enrichment rather than added contamination.</p> <p>The Golder study found that based on review of the depth, site history and the geochemical association of elements, the reported elevated concentrations of arsenic and nickel are considered representative of geogenic conditions and are not expected to be associated with contamination.</p>
2.	Loose Cubic metres (LCM) to mass (tonnes) conversion ratio used is 1 LCM:1.6 tonnes
3.	This report has been prepared in accordance with industry recognised standards and procedures current at the time of the work. The report presents the results of the assessment based on the quoted scope of works (unless otherwise agreed in writing) for the specific purposes of the engagement by the Client. No warranties expressed or implied, are offered to any third parties and no liability will be accepted for use of this report by third parties.
4.	All information provided by third parties has been assumed to be correct and complete. Agon does not assume any liability for misrepresentation of information by third parties or for matters not visible, accessible or present on the subject site.
5.	Opinions and judgements expressed herein are based on Agon's understanding of current regulatory standards and should not be construed as legal opinions. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties other than those listed above.
6.	This report should be read in full.
7.	Test result outcomes can lead to two classification possibilities, however the classification decision follows the preference of the waste management hierarchy.

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5. Attachments

ATTACHMENT A: TABULATED RESULTS

ATTACHMENT B: 95% UCL AVE CALCULATIONS

ATTACHMENT C: LABORATORY CERTIFICATES

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ATTACHMENT A: TABULATED RESULTS

Table with 20 columns for chemical species (e.g., 6:2 Fluorotelomer sulfonic acid, 4:2 Fluorotelomer sulfonic acid, N-Ethyl perfluorooctane sulfonamide) and 2 rows of data (EQL and various EPA/Victoria IWRG621 PIW Category limits).

Main data table with columns for Location Code and Field ID, and 20 columns for chemical species. Rows include various field IDs such as SX_OB_20220315_07_58_SS_Primary_EUF.

	MAH					Solvents					SPOCAS
	Monocyclic aromatic hydrocarbons EPAVic	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl Ketone	pH (CaCl2)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold											
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold											
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold											
EPA PFAS Classification - Tunnel Zone - No option for disposal threshold											
EPA Victoria IWRG621 PIW Category B Leached Upper Limits											
EPA Victoria IWRG621 PIW Category B Upper Limits	240										
EPA Victoria IWRG621 PIW Category C Leached Upper Limits											
EPA Victoria IWRG621 PIW Category C Upper Limits	70										
EPA Victoria IWRG621 NPIW Upper Limits	7										

Location Code	Field ID											
B06.01	SX_OB_20220315_07_58_SS_Primary_EUF		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
B06.01	SX_OB_20220315_07_58_SS_Primary_EUF											
B06.01	SX_OB_20220315_07_58_SS_Primary_EUF											
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<0.5		<0.5								7.5
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS											
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS	<0.5		<0.5								7.6
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS											
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF											
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF											
B06.01	SX_OB_20220315_11_50_SS_Primary_ALS	<0.5		<0.5								7.6
B06.01	SX_OB_20220315_11_50_SS_Primary_ALS											
B06.01	SX_OB_20220315_11_56_SS_Primary_EUF		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
B06.01	SX_OB_20220315_11_56_SS_Primary_EUF											
B06.01	SX_OB_20220315_11_56_SS_Primary_EUF											
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF											
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF											
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF											
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF											
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS	<0.5		<0.5								7.6
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS											
B06.01	SX_OB_20220315_16_10_SS_Primary_ALS	<0.5		<0.5								7.7
B06.01	SX_OB_20220315_16_10_SS_Primary_ALS											
B06.01	SX_OB_20220315_20_53_SS_Primary_ALS	<0.5		<0.5								7.6
B06.01	SX_OB_20220315_20_53_SS_Primary_ALS											
B06.01	SX_OB_20220315_20_54_SS_Primary_EUF		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
B06.01	SX_OB_20220315_20_54_SS_Primary_EUF											
B06.01	SX_OB_20220315_20_54_SS_Primary_EUF											
B06.01	SX_OB_20220316_00_04_SS_Primary_ALS	<0.5		<0.5								7.8
B06.01	SX_OB_20220316_00_04_SS_Primary_ALS											
B06.01	SX_OB_20220316_00_08_SS_Primary_EUF		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
B06.01	SX_OB_20220316_00_08_SS_Primary_EUF											
B06.01	SX_OB_20220316_00_08_SS_Primary_EUF											
B06.01	SX_OB_20220316_04_11_SS_Primary_ALS	<0.5		<0.5								7.8
B06.01	SX_OB_20220316_04_11_SS_Primary_ALS											
B06.01	SX_OB_20220316_04_23_SS_Primary_EUF		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
B06.01	SX_OB_20220316_04_23_SS_Primary_EUF											
B06.01	SX_OB_20220316_04_23_SS_Primary_EUF											

							Metals																									
							Arsenic	Cadmium	Copper	Chromium (III+VI)	Chromium (hexavalent)	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ (LOR)					
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg						
EQL							2	0.4	5	5	1	5	0.1	5	5	2	2	10	5	0.5	1	0.5	0.5	0.5	0.5	0.5						
Location Code	Field ID	Date	Lab Report Number	Lab Name	Sample Type	Parent Sample																										
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	15/03/2022	871571	MGT	Normal		32	<0.4	78	150	<1	5.2	<0.1	<5	230	<2	<2	<10	170			<0.5	<0.5	<0.5	<0.5	<0.5	1.2					
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF	15/03/2022	871571	MGT	Field_D	M22-Ma31648	27	<0.4	63	150	<1	6.3	<0.1	<5	170	<2	<2	<10	100			<0.5	<0.5	<0.5	<0.5	<0.5	1.2					
RPD							17	0	21	0	0	19	0	0	30	0	0	0	52			0	0	0	0	0	0					
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	15/03/2022	871571	MGT	Normal		32	<0.4	78	150	<1	5.2	<0.1	<5	230	<2	<2	<10	170			<0.5	<0.5	<0.5	<0.5	<0.5	1.2					
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS	15/03/2022	EM2204587	ALSE-Melbourne	Interlab_D	M22-Ma31648	26	<1	57	98	<1.0	<5	<0.1	<5	132	<5	<2	<10	86	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2					
RPD							21	0	31	42	0	4	0	0	54	0	0	0	66			0	0	0	0	0	0					
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	15/03/2022	871571	MGT	Normal																											
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF	15/03/2022	871571	MGT	Field_D	M22-Ma31658																										
RPD																																
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	15/03/2022	871571	MGT	Normal																											
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF	15/03/2022	871571	MGT	Field_D	M22-Ma31666																										
RPD																																
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	15/03/2022	871571	MGT	Normal																											
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS	15/03/2022	EM2204587	ALSE-Melbourne	Interlab_D	M22-Ma31666																										
RPD																																
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	15/03/2022	EM2204587	ALSE-Melbourne	Normal		22	<1	48	95	<1.0	<5	<0.1	<5	120	<5	<2	<10	82	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2					
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS	15/03/2022	EM2204587	ALSE-Melbourne	Field_D	EM2204587001	24	<1	52	101	<1.0	<5	<0.1	<5	140	<5	<2	<10	93	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2					
RPD							9	0	8	6	0	0	0	0	15	0	0	0	13	0	0	0	0	0	0	0	0					
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	15/03/2022	EM2204587	ALSE-Melbourne	Normal		22	<1	48	95	<1.0	<5	<0.1	<5	120	<5	<2	<10	82	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2					
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF	15/03/2022	871571	MGT	Interlab_D	EM2204587001	33	<0.4	82	180	1.0	6.6	<0.1	<5	220	<2	<2	<10	150	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2					
RPD							40	0	52	62	0	28	0	0	59	0	0	0	59			0	0	0	0	0	0					
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	15/03/2022	EM2204587	ALSE-Melbourne	Normal		22	<1	48	95	<1.0	<5	<0.1	<5	120	<5	<2	<10	82	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2					
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF	15/03/2022	871571	MGT	Interlab_D	EM2204587001																										
RPD																																
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	15/03/2022	EM2204587	ALSE-Melbourne	Normal																											
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS	15/03/2022	EM2204587	ALSE-Melbourne	Field_D	EM2204587011																										
RPD																																
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	15/03/2022	EM2204587	ALSE-Melbourne	Normal																											
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF	15/03/2022	871571	MGT	Interlab_D	EM2204587011																										
RPD																																

*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: 81 (1 - 10 x EQL); 50 (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

EQL	PAH														BTEX						TRH						TPH			
	Benzo(a)pyrene TEQ calc (Half)	Benzo(a) pyrene	Benzo(b+)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene Total	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	C6-C9	C10-C14	C15-C28
0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.2	0.3	20	20	50	50	100	100	50	20	20	50	50

Location Code	Field ID	Benzo(a)pyrene TEQ calc (Half)	Benzo(a) pyrene	Benzo(b+)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene Total	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	C6-C9	C10-C14	C15-C28	C29-C36	
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF																																
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF																																
RPD																																	
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF																																
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF																																
RPD																																	
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF																																
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS																																
RPD																																	
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF																																
RPD																																	
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS																																
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS																																
RPD																																	
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS																																
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF																																
RPD																																	

*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 n
 ***Interlab Duplicates are matched on a per compound basis as methods vary between labor

EQL	Organochlorine Pesticides																																
	+Σ10-C36 (Sum of total)	Aldrin	Dieldrin	Aldrin + Dieldrin	DDD	DDT	4,4-DDE	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endrin	Endrin ketone	Endrin aldehyde	Endosulfan sulphate	Chlordane	Chlordane (cis)	Chlordane (trans)	Hexachlorobenzene	Heptachlor	Heptachlor epoxide	α-BHC	β-BHC	δ-BHC	γ-BHC (Lindane)	Methoxychlor	Toxaphene	Organochlorine pesticides EPA Vic	Other organochlorine pesticides EPA Vic	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol		
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
50	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.03	0.03	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5	0.1	0.03	0.5	0.5	1	
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5	<0.5	<1	
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5	<0.5	<1	
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5	<0.5	<1	
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS	<50	<0.05	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.50	<0.50	<1.00		
RPD		0	0	0	0	0	0	0	0	0	0		0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF																																
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF																																
RPD																																	
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF																																
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF																																
RPD																																	
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF																																
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS																																
RPD																																	
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<50	<0.05	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.50	<0.50	<1.00		
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS	<50	<0.05	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.50	<0.50	<1.00		
RPD		0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<50	<0.05	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.50	<0.50	<1.00		
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5	<0.5	<1	
RPD		0	0	0	0	0	0	0	0	0	0		0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<50	<0.05	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.50	<0.50	<1.00		
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF																																
RPD																																	
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS																																
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS																																
RPD																																	
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS																																
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF																																
RPD																																	

*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 n
 ***Interlab Duplicates are matched on a per compound basis as methods vary between labor

		Phenols																													
		2,4,6-Trichlorophenol	2,6-Dichlorophenol	4-chloro-3-methylphenol	Pentachlorophenol	2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4,6-Dinitro-2-methylphenol	Tetrachlorophenols	2,3,5,6-Tetrachlorophenol	Cresol Total	4,6-Dinitro-o-cyclohexyl phenol	Phenols (halogenated) EPA Vic	Phenols (non-halogenated) EPA Vic	2,4-Dimethylphenol	2-Methylphenol	2-Nitrophenol	2,4-Dinitrophenol	3&4-Methylphenol (m&p-cresol)	4-Nitrophenol	Dinoseb	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	10:2 Fluorotolomer sulfonic acid (10:2 FTS)		8:2 Fluorotolomer sulfonic acid (8:2 FTS)		6:2 Fluorotolomer sulfonic acid (6:2 FTS)		4:2 Fluorotolomer sulfonic	
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	
EQL		1	0.5	1	1	0.05	5	10	0.03	0.5	20	1	20	0.5	0.2	1	5	0.4	5	20	0.5	1	20	0.00001	0.005	0.00001	0.005	0.00005	0.01	0.00001	
Location Code	Field ID																														
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	<1	<0.5	<1	<1	<5	<10	<1	<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1	<20		<0.005		<0.005		<0.01			
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF	<1	<0.5	<1	<1	<5	<10	<1	<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1	<20		<0.005		<0.005		<0.01			
RPD		0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0		0		0		0			
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	<1	<0.5	<1	<1	<5	<10	<1	<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1	<20		<0.005		<0.005		<0.01			
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS	<1.00	<0.50	<1.00	<1.0	<0.05	<5	<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1				<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005		
RPD		0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0		0		0		0				
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF																						<0.00001		<0.00001		<0.00005		<0.00001		
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF																						<0.00001		<0.00001		<0.00005		<0.00001		
RPD																							0		0		0		0		
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF																						<0.00001		<0.00001		<0.00005		<0.00001		
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF																						<0.00001		<0.00001		<0.00005		<0.00001		
RPD																							0		0		0		0		
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF																						<0.00001		<0.00001		<0.00005		<0.00001		
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS																						<0.00005		<0.00005		<0.00005		<0.00005		
RPD																							0		0		0		0		
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<1.00	<0.50	<1.00	<1.0	<0.05	<5	<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1				<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005		
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS	<1.00	<0.50	<1.00	<1.0	<0.05	<5	<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1				<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005		
RPD		0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0		0		0		0		0		
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<1.00	<0.50	<1.00	<1.0	<0.05	<5	<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1				<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005		
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF	<1	<0.5	<1	<1	<5	<10	<0.5	<20				<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1	<20		<0.005		<0.005		<0.01			
RPD		0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0		0		0		0		0		
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<1.00	<0.50	<1.00	<1.0	<0.05	<5	<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1				<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005		
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF																						<0.00001		<0.00001		<0.00005		<0.00001		
RPD																							0		0		0		0		
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS																						<0.00005		<0.00005		<0.00005		<0.00005		
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS																						<0.00005		<0.00005		<0.00005		<0.00005		
RPD																							0		0		0		0		
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS																						<0.00005		<0.00005		<0.00005		<0.00005		
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF																						<0.00001		<0.00001		<0.00005		<0.00001		
RPD																							0		0		0		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 n
 ***Interlab Duplicates are matched on a per compound basis as methods vary between labor

EQL	acid (4:2 FTS)	N-Ethyl perfluorooctane sulfonamide (NEFOSA)		N-ethyl-perfluorooctanesulfonamide doacetic acid (NEFOSAA)		N-ethylperfluorooctanesulfonamideethanol (NEFOSE)		N-Methyl perfluorooctane sulfonamide (NMeFOSA)		N-methylperfluorooctane sulfonamideacetic acid (NMeFOSAA)		N-Methylperfluorooctanesulfonamideethanol (N-MeFOSE)		Perfluorobutanoic acid (PFBA)		Perfluorobutane sulfonic acid (PFBS)		Perfluorodecanoic acid (PFDA)		Perfluorodecanoic acid (PFDoDA)		Perfluorodecane sulfonic acid (PFDS)		Perfluorooctanoic acid			
	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	
	0.005	0.00005	0.005	0.00002	0.01	0.00005	0.005	0.00005	0.005	0.00002	0.01	0.00005	0.005	0.00005	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.00001
Location Code	Field ID																										
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	<0.005		<0.005		<0.01		<0.005		<0.005		<0.01		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005	
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF	<0.005		<0.005		<0.01		<0.005		<0.005		<0.01		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005	
RPD		0		0		0		0		0		0		0		0		0		0		0		0		0	
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	<0.005		<0.005		<0.01		<0.005		<0.005		<0.01		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005	
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.0001	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.00002	<0.00002
RPD		0		0		0		0		0		0		0		0		0		0		0		0		0	
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD			0		0		0		0		0		0		0		0		0		0		0		0		0
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD			0		0		0		0		0		0		0		0		0		0		0		0		0
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS		<0.00005		<0.00002		<0.00005		<0.00005		<0.00002		<0.00005		<0.0001		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
RPD			0		0		0		0		0		0		0		0		0		0		0		0		0
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.0001	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.00002	<0.00002
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.0001	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.00002	<0.00002
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.0001	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.00002	<0.00002
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF	<0.005		<0.005		<0.01		<0.005		<0.005		<0.01		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005	
RPD		0		0		0		0		0		0		0		0		0		0		0		0		0	
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.0001	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.00002	<0.00002
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD			0		0		0		0		0		0		0		0		0		0		0		0		0
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS		<0.00005		<0.00002		<0.00005		<0.00005		<0.00002		<0.00005		<0.0001		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS		<0.00005		<0.00002		<0.00005		<0.00005		<0.00002		<0.00005		<0.0001		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
RPD			0		0		0		0		0		0		0		0		0		0		0		0		0
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS		<0.00005		<0.00002		<0.00005		<0.00005		<0.00002		<0.00005		<0.0001		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD			0		0		0		0		0		0		0		0		0		0		0		0		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 n
 ***Interlab Duplicates are matched on a per compound basis as methods vary between labor

		PFOS/PFOA																								
		Perfluoroheptane sulfonic acid (PFHpS)		Perfluorohexanoic acid (PFHxA)		Perfluorononanoic acid (PFNA)		Perfluorononanesulfonic acid (PFNS)(trace)		Perfluorooctanoic acid (PFOA)		Perfluorooctane sulfonamide (PFOSA)		Perfluoropentanoic acid (PFPeA)		Perfluoropentane sulfonic acid (PFPeS)		Perfluoropropanesulfonic acid (PFPrS)		Perfluorotetradecanoic acid (PFTeDA)		Perfluorotridecanoic acid (PFTrDA)		Perfluoroundecanoic acid		
		mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/L
EQL		0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00002	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005
Location Code	Field ID																									
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005
RPD		0		0		0		0		0		0		0		0		0		0		0		0		0
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050
RPD		0		0		0		0		0		0		0		0		0		0		0		0		0
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD		0		0		0		0		0		0		0		0		0		0		0		0		0
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD		0		0		0		0		0		0		0		0		0		0		0		0		0
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS	<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
RPD		0		0		0		0		0		0		0		0		0		0		0		0		0
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050
RPD		0		0		0		0		0		0		0		0		0		0		0		0		0
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005
RPD		0		0		0		0		0		0		0		0		0		0		0		0		0
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD		0		0		0		0		0		0		0		0		0		0		0		0		0
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS	<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
RPD		0		0		0		0		0		0		0		0		0		0		0		0		0
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD		0		0		0		0		0		0		0		0		0		0		0		0		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 n
 ***Interlab Duplicates are matched on a per compound basis as methods vary between labor

	Hydrocarbons															NA			PCBs										Inorganics										
	Dichloromethane mg/kg	Hexachlorobutadiene mg/kg	Other chlorinated hydrocarbons EPAVc mg/kg	Trichloroethene mg/kg	Chlorinated hydrocarbons EPAVc mg/kg	cis-1,2-dichloroethene mg/kg	1,1,2-trichloroethane mg/kg	trans-1,3-dichloropropene mg/kg	Vinyl chloride mg/kg	Bromoform mg/kg	Carbon tetrachloride mg/kg	Chlorodibromomethane mg/kg	Chloroethane mg/kg	trans-1,2-dichloroethene mg/kg	Tetrachloroethene mg/kg	Sum of WA DWER PFAS (n=10)* UG/KG	Moisture Content µg/L	%	Arochlor 1232 mg/kg	Arochlor 1242 mg/kg	Arochlor 1248 mg/kg	Arochlor 1254 mg/kg	Arochlor 1221 mg/kg	Arochlor 1260 mg/kg	Arochlor 1016 mg/kg	PCBs (sum of total) mg/kg	pH (after HCl) -	pH (Final) -	pH (Initial) -	pH of Leaching Fluid -	pH (aqueous extract) -	Fluoride mg/kg	Moisture Content (dried @ 103°C) %	Cyanide Total mg/kg					
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.05		1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100	1	5				
	Location Code	Field ID																																					
B06.01	SX OB 20220315_15_56_SS_Primary_EUF		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				8.3	<100	33	<5			
B06.01	SX OB 20220315_15_57_SS_Duplicate_EUF		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				8.4	160	32	<5			
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	46	3	0		
B06.01	SX OB 20220315_15_56_SS_Primary_EUF		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				8.3	<100	33	<5			
B06.01	SX OB 20220315_15_58_SS_Triplicate_ALS		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10.0	<0.05	30.7										<0.1	1.4	5.0	8.9	5.0			110		<5			
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0											0								10		0			
B06.01	SX OB 20220315_15_56_SS_Primary_EUF														<0.05																				5.3		5.1		
B06.01	SX OB 20220315_15_57_SS_Duplicate_EUF														<0.05																				5.2		5.1		
RPD															0																				2		0		
B06.01	SX OB 20220315_15_56_SS_Primary_EUF														<0.05																					9.0		6.2	
B06.01	SX OB 20220315_15_57_SS_Duplicate_EUF														<0.05																					8.9		6.2	
RPD															0																					1		0	
B06.01	SX OB 20220315_15_56_SS_Primary_EUF														<0.05																						9.0		6.2
B06.01	SX OB 20220315_15_58_SS_Triplicate_ALS															<0.01																				8.9			
RPD																																					1		
B06.01	SX OB 20220315_08_04_SS_Primary_ALS		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10.0	<0.05	30.4										<0.1	1.4	5.1	9.2	5.0				110		<5		
B06.01	SX OB 20220315_08_05_SS_Duplicate_ALS		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10.0	<0.05	32.8										<0.1	1.4	5.1	8.8	5.0				110		<5		
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	8											0	0	0	4	0				0		0		
B06.01	SX OB 20220315_08_04_SS_Primary_ALS		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10.0	<0.05	30.4									<0.1	1.4	5.1	9.2	5.0						110		<5	
B06.01	SX OB 20220315_08_06_SS_Triplicate_EUF		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					8.3	120	33	<5		
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0											0										9		0	
B06.01	SX OB 20220315_08_04_SS_Primary_ALS		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10.0	<0.05	30.4									<0.1	1.4	5.1	9.2	5.0						110		<5	
B06.01	SX OB 20220315_08_06_SS_Triplicate_EUF														<0.05																					5.2		5.1	
RPD															0																					2		2	
B06.01	SX OB 20220315_08_04_SS_Primary_ALS														<0.01																					9.1			
B06.01	SX OB 20220315_08_05_SS_Duplicate_ALS														<0.01																					9.0			
RPD															0																					1			
B06.01	SX OB 20220315_08_04_SS_Primary_ALS														<0.01																						9.1		
B06.01	SX OB 20220315_08_06_SS_Triplicate_EUF														<0.05																					8.8		6.2	
RPD																																					3		

*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 n
 ***Interlab Duplicates are matched on a per compound basis as methods vary between labor

	Halogenated Benzenes							Halogenated Hydrocarbons					MAH					Solvents					SPOCAS	
	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Bromobenzene	4-chlorotoluene	Chlorobenzene	Iodomethane	Bromomethane	1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Total MAH	Monocyclic aromatic hydrocarbons EPAV/c	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl Ketone	pH (CaCl2)
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1

Location Code	Field ID	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Bromobenzene	4-chlorotoluene	Chlorobenzene	Iodomethane	Bromomethane	1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Total MAH	Monocyclic aromatic hydrocarbons EPAV/c	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl Ketone	pH (CaCl2)
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS	<0.50	<0.50	<0.50				<0.50							<0.5		<0.5								7.6
RPD		0	0	0				0									0								
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF																								
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF																								
RPD																									
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF																								
B06.01	SX_OB_20220315_15_57_SS_Duplicate_EUF																								
RPD																									
B06.01	SX_OB_20220315_15_56_SS_Primary_EUF																								
B06.01	SX_OB_20220315_15_58_SS_Triplicate_ALS																								
RPD																									
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<0.50	<0.50	<0.50				<0.50							<0.5		<0.5								7.5
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS	<0.50	<0.50	<0.50				<0.50							<0.5		<0.5								7.6
RPD		0	0	0				0							0		0								1
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<0.50	<0.50	<0.50				<0.50							<0.5		<0.5								7.5
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS	<0.50	<0.50	<0.50				<0.50							<0.5		<0.5								7.5
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF																								
RPD																									
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS																								
B06.01	SX_OB_20220315_08_05_SS_Duplicate_ALS																								
RPD																									
B06.01	SX_OB_20220315_08_04_SS_Primary_ALS																								
B06.01	SX_OB_20220315_08_06_SS_Triplicate_EUF																								
RPD																									

*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 n
 ***Interlab Duplicates are matched on a per compound basis as methods vary between labor

TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	B06.0120220330114721_03	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001 01</u>
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ATTACHMENT B: 95% UCL AVE CALCULATIONS

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation		ProUCL 5.130/03/2022 11:33:48 AM									
5	From File		WorkSheet_a.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10												
11	Arsenic											
12												
13	General Statistics											
14	Total Number of Observations				12		Number of Distinct Observations				8	
15							Number of Missing Observations				0	
16	Minimum				24		Mean				27.58	
17	Maximum				33		Median				27	
18	SD				3.088		Std. Error of Mean				0.892	
19	Coefficient of Variation				0.112		Skewness				0.626	
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic				0.885		Shapiro Wilk GOF Test					
23	5% Shapiro Wilk Critical Value				0.859		Data appear Normal at 5% Significance Level					
24	Lilliefors Test Statistic				0.215		Lilliefors GOF Test					
25	5% Lilliefors Critical Value				0.243		Data appear Normal at 5% Significance Level					
26	Data appear Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
30	95% Student's-t UCL				29.18		95% Adjusted-CLT UCL (Chen-1995)				29.22	
31							95% Modified-t UCL (Johnson-1978)				29.21	
32												
33	Gamma GOF Test											
34	A-D Test Statistic				0.624		Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value				0.731		Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic				0.228		Kolmogorov-Smirnov Gamma GOF Test					
37	5% K-S Critical Value				0.245		Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data appear Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)				89.78		k star (bias corrected MLE)				67.39	
42	Theta hat (MLE)				0.307		Theta star (bias corrected MLE)				0.409	
43	nu hat (MLE)				2155		nu star (bias corrected)				1617	
44	MLE Mean (bias corrected)				27.58		MLE Sd (bias corrected)				3.36	
45							Approximate Chi Square Value (0.05)				1525	
46	Adjusted Level of Significance				0.029		Adjusted Chi Square Value				1511	
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50))				29.25		95% Adjusted Gamma UCL (use when n<50)				29.52	
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.892		Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value				0.859		Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic				0.218		Lilliefors Lognormal GOF Test					
55	5% Lilliefors Critical Value				0.243		Data appear Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L
56	Data appear Lognormal at 5% Significance Level											
57												
58	Lognormal Statistics											
59	Minimum of Logged Data				3.178		Mean of logged Data				3.312	
60	Maximum of Logged Data				3.497		SD of logged Data				0.11	
61												
62	Assuming Lognormal Distribution											
63	95% H-UCL				29.27		90% Chebyshev (MVUE) UCL				30.2	
64	95% Chebyshev (MVUE) UCL				31.39		97.5% Chebyshev (MVUE) UCL				33.03	
65	99% Chebyshev (MVUE) UCL				36.27							
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data appear to follow a Discernible Distribution at 5% Significance Level											
69												
70	Nonparametric Distribution Free UCLs											
71	95% CLT UCL				29.05		95% Jackknife UCL				29.18	
72	95% Standard Bootstrap UCL				28.97		95% Bootstrap-t UCL				29.35	
73	95% Hall's Bootstrap UCL				29		95% Percentile Bootstrap UCL				29.17	
74	95% BCA Bootstrap UCL				29.33							
75	90% Chebyshev(Mean, Sd) UCL				30.26		95% Chebyshev(Mean, Sd) UCL				31.47	
76	97.5% Chebyshev(Mean, Sd) UCL				33.15		99% Chebyshev(Mean, Sd) UCL				36.45	
77												
78	Suggested UCL to Use											
79	95% Student's-t UCL				29.18							
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	Recommendations are based upon data size, data distribution, and skewness.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
85												
86												
87	Nickel											
88												
89	General Statistics											
90	Total Number of Observations				12		Number of Distinct Observations				11	
91							Number of Missing Observations				0	
92	Minimum				120		Mean				165.3	
93	Maximum				230		Median				165	
94	SD				37.08		Std. Error of Mean				10.7	
95	Coefficient of Variation				0.224		Skewness				0.491	
96												
97	Normal GOF Test											
98	Shapiro Wilk Test Statistic				0.933		Shapiro Wilk GOF Test					
99	5% Shapiro Wilk Critical Value				0.859		Data appear Normal at 5% Significance Level					
100	Lilliefors Test Statistic				0.134		Lilliefors GOF Test					
101	5% Lilliefors Critical Value				0.243		Data appear Normal at 5% Significance Level					
102	Data appear Normal at 5% Significance Level											
103												
104	Assuming Normal Distribution											
105	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
106	95% Student's-t UCL				184.5		95% Adjusted-CLT UCL (Chen-1995)				184.5	
107							95% Modified-t UCL (Johnson-1978)				184.7	
108												
109	Gamma GOF Test											
110	A-D Test Statistic				0.277		Anderson-Darling Gamma GOF Test					

	A	B	C	D	E	F	G	H	I	J	K	L
111	5% A-D Critical Value					0.732	Detected data appear Gamma Distributed at 5% Significance Level					
112	K-S Test Statistic					0.145	Kolmogorov-Smirnov Gamma GOF Test					
113	5% K-S Critical Value					0.245	Detected data appear Gamma Distributed at 5% Significance Level					
114	Detected data appear Gamma Distributed at 5% Significance Level											
115												
116	Gamma Statistics											
117	k hat (MLE)					22.26	k star (bias corrected MLE)					16.75
118	Theta hat (MLE)					7.425	Theta star (bias corrected MLE)					9.867
119	nu hat (MLE)					534.2	nu star (bias corrected)					401.9
120	MLE Mean (bias corrected)					165.3	MLE Sd (bias corrected)					40.38
121							Approximate Chi Square Value (0.05)					356.5
122	Adjusted Level of Significance					0.029	Adjusted Chi Square Value					349.9
123												
124	Assuming Gamma Distribution											
125	95% Approximate Gamma UCL (use when n>=50))					186.3	95% Adjusted Gamma UCL (use when n<50)					189.8
126												
127	Lognormal GOF Test											
128	Shapiro Wilk Test Statistic					0.946	Shapiro Wilk Lognormal GOF Test					
129	5% Shapiro Wilk Critical Value					0.859	Data appear Lognormal at 5% Significance Level					
130	Lilliefors Test Statistic					0.134	Lilliefors Lognormal GOF Test					
131	5% Lilliefors Critical Value					0.243	Data appear Lognormal at 5% Significance Level					
132	Data appear Lognormal at 5% Significance Level											
133												
134	Lognormal Statistics											
135	Minimum of Logged Data					4.787	Mean of logged Data					5.085
136	Maximum of Logged Data					5.438	SD of logged Data					0.221
137												
138	Assuming Lognormal Distribution											
139	95% H-UCL					187.4	90% Chebyshev (MVUE) UCL					197.1
140	95% Chebyshev (MVUE) UCL					211.5	97.5% Chebyshev (MVUE) UCL					231.5
141	99% Chebyshev (MVUE) UCL					270.8						
142												
143	Nonparametric Distribution Free UCL Statistics											
144	Data appear to follow a Discernible Distribution at 5% Significance Level											
145												
146	Nonparametric Distribution Free UCLs											
147	95% CLT UCL					182.9	95% Jackknife UCL					184.5
148	95% Standard Bootstrap UCL					182.1	95% Bootstrap-t UCL					185.9
149	95% Hall's Bootstrap UCL					184.8	95% Percentile Bootstrap UCL					182.9
150	95% BCA Bootstrap UCL					183.5						
151	90% Chebyshev(Mean, Sd) UCL					197.4	95% Chebyshev(Mean, Sd) UCL					211.9
152	97.5% Chebyshev(Mean, Sd) UCL					232.1	99% Chebyshev(Mean, Sd) UCL					271.8
153												
154	Suggested UCL to Use											
155	95% Student's-t UCL					184.5						
156												
157	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
158	Recommendations are based upon data size, data distribution, and skewness.											
159	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
160	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
161												

TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	B06.0120220330114721_03	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001 01</u>
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ATTACHMENT C: LABORATORY CERTIFICATES



CHAIN OF CUSTODY RECORD

Eurofins | Environment Testing ABN 50 005 085 521

Sydney Laboratory
Unit F3 Bld F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory
Unit 1 21 Smallwood Place Murarie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

Company		AGON Environmental - Tunnel Spoil Testing		Project No	JC0927			Project Manager	Craig Trimbur		Sampler(s)	Hannah - EP Risk & Bronan - Agon				
Address		Unit H76, 63-85 Turner St, Port Melbourne VIC 3207		Project Name	20220316073519-Eurofin-20			EDD Format	ESdat, EQuIS etc		Handed over by					
Contact Name	Craig Trimbur David Lawson		Analyses Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.	Spoil Sample Preparation Suite WGTP-R1-TRH/PAH/Phenois/OCPI/POBI/VOCI/Vimy/Chionite/ Metals (As, Cd, Cr, Cu, Ni, Pb,Hg, Ag, Sn, Mo, Se, Zn)/Cr6+/CN/ Total Fluoride/ pH PFAS Extended Suite - 0.1- 5ug/kg ASLP PH 5 - PFAS 0.01-0.05 ug/l ASLP Reagent - PFAS 0.01-0.05ug/l									Email for Invoice	finance@agonenviro.com.au LabReports.TST@agonenviro.com.au		
Phone No	+61 400 826 907 (Craig) +61 490 411 004 (David)												Email for Results	LabReports.TST@agonenviro.com.au agonenvironmental@esdat.com.au motherhublabresults1@wgtp.com.au		
Special Directions	Please provide an interim lab report if finalised report has not been provided by 14 days from sample receipt. Please provide eSRN along with oter sample receipt documentation.												Containers		Required Turnaround Time (TAT)	
Purchase Order													Change container type & size if necessary		Default will be 5 days if not ticked	
Quote ID No	Agon WGTP TST												500mL Plastic		<input type="checkbox"/> Overnight (reporting by 9am) ♦ <input type="checkbox"/> Same day ♦ <input type="checkbox"/> 1 day ♦ <input type="checkbox"/> 2 days ♦ <input type="checkbox"/> 3 days ♦ <input checked="" type="checkbox"/> 5 days (Standard) <input type="checkbox"/> Other()	
No	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)										Sample Comments / Dangerous Goods Hazard Warning			
1	SX_20220315_07_58_SS_Primary_EUF	15.03.2022 7:58	S	X	X	X	X	X					1			
2	SX_20220315_08_06_SS_Triplicate_EUF	15.03.2022 7:58	S	X	X	X	X	X					1			
3	SX_20220315_11_56_SS_Primary_EUF	15.03.2002 11:56	S	X	X	X	X	X					1			
4	SX_20220315_15_56_SS_Primary_EUF	15.03.2022 15:56	S	X	X	X	X	X								
5	SX_20220315_15_57_SS_Duplicate_EUF	15.03.2022 5:57	S	X	X	X	X	X								
6	SX_20220315_16_26_SR_Rinsate_EUF	15.03.2022 16:26	W			X										
7	SX_20220315_16_27_SB_Primary_EUF	15.03.2022 16:27	W			X										
8	SX_20220315_20_54_SS_Primary_EUF	15.03.2022 20:54	S	X	X	X	X	X					NO ICE			
9	SX_20220316_00_08_SS_Primary_EUF	16.03.2022 00:08	S	X	X	X	X	X					19.3 -0.2 19.1			
10	SX_20220316_04_23_SS_Primary_EUF	16.03.2022 04:23	S	X	X	X	X	X								
Total Counts				8	8	10	8	8					3			
Method of Shipment	<input checked="" type="checkbox"/> Courier #		<input type="checkbox"/> Hand Delivered		<input type="checkbox"/> Postal		Name	Emma Strong		Signature	ES	Date	16.03.22	Time		
Laboratory Use Only	Received By	ANH		SYD BNE MEL PER ADL NTL DRW		Signature	[Signature]		Date	16/3/22	Time	12:50pm	Temperature	19.1		
	Received By			SYD BNE MEL PER ADL NTL DRW		Signature			Date		Time		Report No	871571		

Jake

Agon Environmental Pty Ltd - VIC
3/224 Glen Osmond Road
Fullarton
SA 5063



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: **David Lawson**

Report **871571-S**
Project name **20220316073519-Eurofin-20**
Project ID **JC0927**
Received Date **Mar 16, 2022**

Client Sample ID			SX_20220315_07_58_SS_Pri mary_EUF	SX_20220315_08_06_SS_Trip licate_EUF	SX_20220315_11_56_SS_Pri mary_EUF	SX_20220315_15_56_SS_Pri mary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma31645	M22-Ma31646	M22-Ma31647	M22-Ma31648
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 15, 2022	Mar 15, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Volatile Organics						
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SX_20220315_07_58_SS_Primary_EUF Soil M22-Ma31645 Mar 15, 2022	SX_20220315_08_06_SS_Triplicate_EUF Soil M22-Ma31646 Mar 15, 2022	SX_20220315_11_56_SS_Primary_EUF Soil M22-Ma31647 Mar 15, 2022	SX_20220315_15_56_SS_Primary_EUF Soil M22-Ma31648 Mar 15, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	82	59	80	94
Toluene-d8 (surr.)	1	%	85	59	77	77
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SX_20220315_07_58_SS_Pri mary_EUF	SX_20220315_08_06_SS_Trip licate_EUF	SX_20220315_11_56_SS_Pri mary_EUF	SX_20220315_15_56_SS_Pri mary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma31645	M22-Ma31646	M22-Ma31647	M22-Ma31648
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 15, 2022	Mar 15, 2022
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	87	91	83	91
p-Terphenyl-d14 (surr.)	1	%	81	84	85	86
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	69	64	77	69
Tetrachloro-m-xylene (surr.)	1	%	54	59	62	61

Client Sample ID			SX_20220315_07_58_SS_Primary_EUF	SX_20220315_08_06_SS_Triplicate_EUF	SX_20220315_11_56_SS_Primary_EUF	SX_20220315_15_56_SS_Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma31645	M22-Ma31646	M22-Ma31647	M22-Ma31648
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 15, 2022	Mar 15, 2022
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	69	64	77	69
Tetrachloro-m-xylene (surr.)	1	%	54	59	62	61
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	42	45	43	45
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Chromium (hexavalent)						
Chromium (hexavalent)	1	mg/kg	< 1	1.0	< 1	< 1
Cyanide (total)						
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
Fluoride (Total)						
Fluoride (Total)	100	mg/kg	< 100	120	110	< 100
pH (1:5 Aqueous extract at 25°C as rec.)						
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	7.9	8.3	8.0	8.3
% Moisture						
% Moisture	1	%	31	33	34	33
Heavy Metals						
Arsenic	2	mg/kg	25	33	31	32
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	110	180	140	150
Copper	5	mg/kg	62	82	100	78
Lead	5	mg/kg	< 5	6.6	< 5	5.2
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5

Client Sample ID			SX_20220315_07_58_SS_Primary_EUF	SX_20220315_08_06_SS_Triplicate_EUF	SX_20220315_11_56_SS_Primary_EUF	SX_20220315_15_56_SS_Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma31645	M22-Ma31646	M22-Ma31647	M22-Ma31648
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 15, 2022	Mar 15, 2022
Test/Reference	LOR	Unit				
Heavy Metals						
Nickel	5	mg/kg	160	220	200	230
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	130	150	130	170
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTTrDA) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTTeDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	75	109	96	86
13C5-PFPeA (surr.)	1	%	77	132	69	83
13C5-PFHxA (surr.)	1	%	76	111	98	84
13C4-PFHpA (surr.)	1	%	76	108	96	87
13C8-PFOA (surr.)	1	%	97	115	98	76
13C5-PFNA (surr.)	1	%	68	95	81	77
13C6-PFDA (surr.)	1	%	67	109	93	82
13C2-PFUnDA (surr.)	1	%	64	136	106	97
13C2-PFDoDA (surr.)	1	%	51	107	90	88
13C2-PFTTeDA (surr.)	1	%	18	93	61	75
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	71	113	100	86
D3-N-MeFOSA (surr.)	1	%	61	105	91	92
D5-N-EtFOSA (surr.)	1	%	59	114	90	97
D7-N-MeFOSE (surr.)	1	%	65	119	102	94
D9-N-EtFOSE (surr.)	1	%	55	113	95	90
D5-N-EtFOSAA (surr.)	1	%	55	112	96	83
D3-N-MeFOSAA (surr.)	1	%	66	116	112	90

Client Sample ID			SX_20220315_07_58_SS_Primary_EUF	SX_20220315_08_06_SS_Triplicate_EUF	SX_20220315_11_56_SS_Primary_EUF	SX_20220315_15_56_SS_Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma31645	M22-Ma31646	M22-Ma31647	M22-Ma31648
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 15, 2022	Mar 15, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFASs)						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	80	105	95	78
18O2-PFHxS (surr.)	1	%	102	148	112	107
13C8-PFOS (surr.)	1	%	68	130	118	91
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	73	107	104	80
13C2-6:2 FTSA (surr.)	1	%	62	116	94	66
13C2-8:2 FTSA (surr.)	1	%	68	95	85	90
13C2-10:2 FTSA (surr.)	1	%	58	132	91	87
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

Client Sample ID			SX_20220315_15_57_SS_Duplicate_EUF	SX_20220315_20_54_SS_Primary_EUF	SX_20220316_00_08_SS_Primary_EUF	SX_20220316_04_23_SS_Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma31649	M22-Ma31652	M22-Ma31653	M22-Ma31654
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 16, 2022	Mar 16, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			SX_20220315_15_57_SS_Duplicate_EUF	SX_20220315_20_54_SS_Primary_EUF	SX_20220316_00_08_SS_Primary_EUF	SX_20220316_04_23_SS_Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma31649	M22-Ma31652	M22-Ma31653	M22-Ma31654
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 16, 2022	Mar 16, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Volatile Organics						
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SX_20220315_15_57_SS_Duplicate_EUF	SX_20220315_20_54_SS_Primary_EUF	SX_20220316_00_08_SS_Primary_EUF	SX_20220316_04_23_SS_Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma31649	M22-Ma31652	M22-Ma31653	M22-Ma31654
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 16, 2022	Mar 16, 2022
Test/Reference	LOR	Unit				
Volatile Organics						
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	59	60	55	60
Toluene-d8 (surr.)	1	%	65	80	60	82
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	93	91	95	102
p-Terphenyl-d14 (surr.)	1	%	93	92	93	104
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			SX_20220315_15_57_SS_Duplicate_EUF	SX_20220315_20_54_SS_Primary_EUF	SX_20220316_00_08_SS_Primary_EUF	SX_20220316_04_23_SS_Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma31649	M22-Ma31652	M22-Ma31653	M22-Ma31654
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 16, 2022	Mar 16, 2022
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	103	108	104	102
Tetrachloro-m-xylene (surr.)	1	%	115	112	116	129
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	103	108	104	102
Tetrachloro-m-xylene (surr.)	1	%	115	112	116	129
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			SX_20220315_15_57_SS_Duplicate_EUF	SX_20220315_20_54_SS_Primary_EUF	SX_20220316_00_08_SS_Primary_EUF	SX_20220316_04_23_SS_Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma31649	M22-Ma31652	M22-Ma31653	M22-Ma31654
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 16, 2022	Mar 16, 2022
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	47	42	45	41
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Heavy Metals						
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
Fluoride (Total)	100	mg/kg	160	< 100	< 100	130
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.4	7.7	8.7	8.9
% Moisture	1	%	32	34	35	33
Arsenic	2	mg/kg	27	26	28	29
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	150	140	150	120
Copper	5	mg/kg	63	61	63	58
Lead	5	mg/kg	6.3	5.6	5.6	5.8
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	170	170	180	170
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	100	120	120	120
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTriDA) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	137	54	75	75
13C5-PFPeA (surr.)	1	%	146	53	71	91
13C5-PFHxA (surr.)	1	%	145	55	73	75
13C4-PFHpA (surr.)	1	%	149	56	75	69
13C8-PFOA (surr.)	1	%	130	67	83	71
13C5-PFNA (surr.)	1	%	130	51	73	66
13C6-PFDA (surr.)	1	%	148	59	79	84
13C2-PFUnDA (surr.)	1	%	92	53	76	89
13C2-PFDoDA (surr.)	1	%	13	44	73	71
13C2-PFTeDA (surr.)	1	%	25	24	57	54

Client Sample ID			SX_20220315_15_57_SS_Duplicate_EUF	SX_20220315_20_54_SS_Primary_EUF	SX_20220316_00_08_SS_Primary_EUF	SX_20220316_04_23_SS_Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma31649	M22-Ma31652	M22-Ma31653	M22-Ma31654
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 16, 2022	Mar 16, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	149	52	79	77
D3-N-MeFOSA (surr.)	1	%	43	39	76	78
D5-N-EtFOSA (surr.)	1	%	16	39	84	78
D7-N-MeFOSE (surr.)	1	%	47	51	82	79
D9-N-EtFOSE (surr.)	1	%	21	46	77	74
D5-N-EtFOSAA (surr.)	1	%	137	43	65	67
D3-N-MeFOSAA (surr.)	1	%	147	49	74	74
Perfluoroalkyl sulfonic acids (PFASs)						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	100	52	75	68
18O2-PFHxS (surr.)	1	%	134	55	103	76
13C8-PFOS (surr.)	1	%	118	52	76	90
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	115	52	76	67
13C2-6:2 FTSA (surr.)	1	%	110	62	56	72
13C2-8:2 FTSA (surr.)	1	%	83	67	74	85
13C2-10:2 FTSA (surr.)	1	%	35	38	59	79
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

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
IWRG 621 WGTP Suite			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Mar 17, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Mar 17, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Mar 17, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	Mar 17, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	Mar 17, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 17, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	Mar 17, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	Mar 17, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 17, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 17, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	Mar 17, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	Mar 18, 2022	14 Days
Fluoride (Total) - Method: LTM-INO-4150 Determination of Total Fluoride PART A – CIC - Method: LTM-INO-4150 Determination of Total Fluoride PART B – ISE	Melbourne	Mar 18, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Mar 17, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	Mar 17, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Mar 16, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 17, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 17, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 17, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 17, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 16, 2022	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 16, 2022 12:50 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	871571	Due:	Mar 23, 2022
Project Name:	20220316073519-Eurofin-20	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_20220315_07_58_SS_Primary_EUF	Mar 15, 2022	7:58AM	Soil	M22-Ma31645		X	X	X
2	SX_20220315_08_06_SS_Triplicate_EUF	Mar 15, 2022	8:06AM	Soil	M22-Ma31646		X	X	X
3	SX_20220315_11_56_SS_Primary_EUF	Mar 15, 2022	11:56AM	Soil	M22-Ma31647		X	X	X
4	SX_20220315_15_56_SS_Primary_EUF	Mar 15, 2022	3:56PM	Soil	M22-Ma31648		X	X	X

Company Name: Agon Environmental Pty Ltd - VIC
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: 20220316073519-Eurofin-20
Project ID: JC0927

Order No.:
Report #: 871571
Phone: 08 8338 1009
Fax:

Received: Mar 16, 2022 12:50 PM
Due: Mar 23, 2022
Priority: 5 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
5	SX_20220315_15_57_SS_Duplicate_EUF	Mar 15, 2022	3:57PM	Soil	M22-Ma31649		X	X	X
6	SX_20220315_16_26_SR_Rinsate_EUF	Mar 15, 2022	4:26PM	Water	M22-Ma31650			X	
7	SX_20220315_16_27_SB_Blink_EUF	Mar 15, 2022	4:27PM	Water	M22-Ma31651			X	
8	SX_20220315_20_54_SS_Primary_EUF	Mar 15, 2022	8:54PM	Soil	M22-Ma31652		X	X	X
9	SX_20220316_00_08_SS_P	Mar 16, 2022	12:08AM	Soil	M22-Ma31653		X	X	X

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 16, 2022 12:50 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	871571	Due:	Mar 23, 2022
Project Name:	20220316073519-Eurofin-20	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFAS)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	_00_08_SS_Primary_EUF								
10	SX_20220316_04_23_SS_Primary_EUF	Mar 16, 2022	4:23AM	Soil	M22-Ma31654		X	X	X
11	SX_20220315_07_58_SS_Primary_EUF	Mar 15, 2022	7:58AM	AUS Leachate - pH 5.0	M22-Ma31655	X		X	
12	SX_20220315_08_06_SS_Triplicate_EUF	Mar 15, 2022	8:06AM	AUS Leachate - pH 5.0	M22-Ma31656	X		X	
13	SX_20220315_11_56_SS_Primary_EUF	Mar 15, 2022	11:56AM	AUS Leachate - pH 5.0	M22-Ma31657	X		X	

Company Name: Agon Environmental Pty Ltd - VIC
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Order No.:
Report #: 871571
Phone: 08 8338 1009
Fax:

Received: Mar 16, 2022 12:50 PM
Due: Mar 23, 2022
Priority: 5 Day
Contact Name: Agon Lab Reports (Spoil Project)

Project Name: 20220316073519-Eurofin-20
Project ID: JC0927

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
14	SX_20220315_15_56_SS_Primary_EUF	Mar 15, 2022	3:56PM	AUS Leachate - pH 5.0	M22-Ma31658	X		X	
15	SX_20220315_15_57_SS_Duplicate_EUF	Mar 15, 2022	3:57PM	AUS Leachate - pH 5.0	M22-Ma31659	X		X	
16	SX_20220315_20_54_SS_Primary_EUF	Mar 15, 2022	8:54PM	AUS Leachate - pH 5.0	M22-Ma31660	X		X	
17	SX_20220316_00_08_SS_Primary_EUF	Mar 16, 2022	12:08AM	AUS Leachate - pH 5.0	M22-Ma31661	X		X	
18	SX_20220316_04_23_SS_P	Mar 16, 2022	4:23AM	AUS Leachate - pH 5.0	M22-Ma31662	X		X	

Company Name: Agon Environmental Pty Ltd - VIC
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063
Project Name: 20220316073519-Eurofin-20
Project ID: JC0927

Order No.:
Report #: 871571
Phone: 08 8338 1009
Fax:

Received: Mar 16, 2022 12:50 PM
Due: Mar 23, 2022
Priority: 5 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	_04_23_SS_Primary_EUF			- pH 5.0					
19	SX_20220315_07_58_SS_Primary_EUF	Mar 15, 2022	7:58AM	AUS Leachate - Reagent Water	M22-Ma31663	X		X	
20	SX_20220315_08_06_SS_Triplicate_EUF	Mar 15, 2022	8:06AM	AUS Leachate - Reagent Water	M22-Ma31664	X		X	
21	SX_20220315_11_56_SS_Primary_EUF	Mar 15, 2022	11:56AM	AUS Leachate - Reagent Water	M22-Ma31665	X		X	
22	SX_20220315_15_56_SS_Primary_EUF	Mar 15, 2022	3:56PM	AUS Leachate - Reagent Water	M22-Ma31666	X		X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 16, 2022 12:50 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	871571	Due:	Mar 23, 2022
Project Name:	20220316073519-Eurofin-20	Phone:	08 8338 1009	Priority:	5 Day
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Eurofins Analytical Services Manager : Michael Cassidy

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Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
23	SX_20220315_15_57_SS_Duplicate_EUF	Mar 15, 2022	3:57PM	AUS Leachate - Reagent Water	M22-Ma31667	X		X	
24	SX_20220315_20_54_SS_Primary_EUF	Mar 15, 2022	8:54PM	AUS Leachate - Reagent Water	M22-Ma31668	X		X	
25	SX_20220316_00_08_SS_Primary_EUF	Mar 16, 2022	12:08AM	AUS Leachate - Reagent Water	M22-Ma31669	X		X	
26	SX_20220316_04_23_SS_Primary_EUF	Mar 16, 2022	4:23AM	AUS Leachate - Reagent Water	M22-Ma31670	X		X	
Test Counts						16	8	26	8

Internal Quality Control Review and Glossary

General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- This report replaces any interim results previously issued.

Holding Times

Please refer to '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 prior to sample receipt deadlines as stated on the SRA.

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

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

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre	µg/L: micrograms per litre
ppm: parts per million	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

Terms

APHA	American Public Health Association
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 a moisture has been determined on a solid sample the result is expressed on a dry 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 is representative of 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 like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (<i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
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 be used as a guide only 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

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

- Where a result is reported as a 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.
- 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 is not data from your samples.
- 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.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
- For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- 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						
Total Recoverable Hydrocarbons						
TRH C6-C9	mg/kg	< 20		20	Pass	
TRH C10-C14	mg/kg	< 20		20	Pass	
TRH C15-C28	mg/kg	< 50		50	Pass	
TRH C29-C36	mg/kg	< 50		50	Pass	
Naphthalene	mg/kg	< 0.5		0.5	Pass	
TRH C6-C10	mg/kg	< 20		20	Pass	
TRH >C10-C16	mg/kg	< 50		50	Pass	
TRH >C16-C34	mg/kg	< 100		100	Pass	
TRH >C34-C40	mg/kg	< 100		100	Pass	
Method Blank						
Volatile Organics						
Hexachlorobutadiene	mg/kg	< 0.5		0.5	Pass	
Method Blank						
Volatile Organics						
1.1-Dichloroethane	mg/kg	< 0.5		0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5		0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5		0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5		0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5		0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5		0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5		0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5		0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5		0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5		0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5		0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5		0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5		0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5		0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5		0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5		0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5		0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5		0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5		0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5		0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5		0.5	Pass	
Allyl chloride	mg/kg	< 0.5		0.5	Pass	
Benzene	mg/kg	< 0.1		0.1	Pass	
Bromobenzene	mg/kg	< 0.5		0.5	Pass	
Bromochloromethane	mg/kg	< 0.5		0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5		0.5	Pass	
Bromoform	mg/kg	< 0.5		0.5	Pass	
Bromomethane	mg/kg	< 0.5		0.5	Pass	
Carbon disulfide	mg/kg	< 0.5		0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5		0.5	Pass	
Chlorobenzene	mg/kg	< 0.5		0.5	Pass	
Chloroethane	mg/kg	< 0.5		0.5	Pass	
Chloroform	mg/kg	< 0.5		0.5	Pass	
Chloromethane	mg/kg	< 0.5		0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5		0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5		0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4,5-Trichlorophenol	mg/kg	< 1			1	Pass	
2,4,6-Trichlorophenol	mg/kg	< 1			1	Pass	
2,6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4,6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4,6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2,4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Cyanide (total)	mg/kg	< 5			5	Pass	
Fluoride (Total)	mg/kg	< 100			100	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Molybdenum	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	
Silver	mg/kg	< 2			2	Pass	
Tin	mg/kg	< 10			10	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Zinc	mg/kg	< 5		5	Pass	
Method Blank						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	ug/kg	< 5		5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5		5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5		5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5		5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5		5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5		5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5		5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5		5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5		5	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 5		5	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 5		5	Pass	
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 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5		5	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/kg	< 10		10	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5		5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5		5	Pass	
LCS - % Recovery						
Total Recoverable Hydrocarbons						
TRH C6-C9	%	118		70-130	Pass	
TRH C10-C14	%	125		70-130	Pass	
Naphthalene	%	83		70-130	Pass	
TRH C6-C10	%	118		70-130	Pass	
TRH >C10-C16	%	128		70-130	Pass	
LCS - % Recovery						
Volatile Organics						
1.1-Dichloroethene	%	93		70-130	Pass	
1.1.1-Trichloroethane	%	77		70-130	Pass	
1.2-Dichlorobenzene	%	91		70-130	Pass	
1.2-Dichloroethane	%	98		70-130	Pass	
Benzene	%	94		70-130	Pass	
Ethylbenzene	%	91		70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	88			70-130	Pass	
Toluene	%	88			70-130	Pass	
Trichloroethene	%	92			70-130	Pass	
Xylenes - Total*	%	91			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	85			70-130	Pass	
Acenaphthylene	%	101			70-130	Pass	
Anthracene	%	100			70-130	Pass	
Benz(a)anthracene	%	93			70-130	Pass	
Benzo(a)pyrene	%	87			70-130	Pass	
Benzo(b&i)fluoranthene	%	88			70-130	Pass	
Benzo(g,h,i)perylene	%	86			70-130	Pass	
Benzo(k)fluoranthene	%	83			70-130	Pass	
Chrysene	%	90			70-130	Pass	
Dibenz(a,h)anthracene	%	86			70-130	Pass	
Fluoranthene	%	114			70-130	Pass	
Fluorene	%	98			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	81			70-130	Pass	
Naphthalene	%	82			70-130	Pass	
Phenanthrene	%	78			70-130	Pass	
Pyrene	%	114			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	100			70-130	Pass	
4,4'-DDD	%	93			70-130	Pass	
4,4'-DDE	%	94			70-130	Pass	
4,4'-DDT	%	123			70-130	Pass	
a-HCH	%	109			70-130	Pass	
Aldrin	%	120			70-130	Pass	
b-HCH	%	110			70-130	Pass	
d-HCH	%	119			70-130	Pass	
Dieldrin	%	95			70-130	Pass	
Endosulfan I	%	102			70-130	Pass	
Endosulfan II	%	106			70-130	Pass	
Endosulfan sulphate	%	102			70-130	Pass	
Endrin	%	102			70-130	Pass	
Endrin aldehyde	%	108			70-130	Pass	
Endrin ketone	%	102			70-130	Pass	
g-HCH (Lindane)	%	114			70-130	Pass	
Heptachlor	%	123			70-130	Pass	
Heptachlor epoxide	%	100			70-130	Pass	
Hexachlorobenzene	%	125			70-130	Pass	
Methoxychlor	%	85			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	110			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	71			25-140	Pass	
2,4-Dichlorophenol	%	94			25-140	Pass	
2,4,5-Trichlorophenol	%	103			25-140	Pass	
2,4,6-Trichlorophenol	%	62			25-140	Pass	
2,6-Dichlorophenol	%	88			25-140	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
4-Chloro-3-methylphenol	%	58		25-140	Pass	
Pentachlorophenol	%	51		25-140	Pass	
Tetrachlorophenols - Total	%	59		25-140	Pass	
LCS - % Recovery						
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	%	94		25-140	Pass	
2-Methyl-4,6-dinitrophenol	%	94		25-140	Pass	
2-Nitrophenol	%	93		25-140	Pass	
2,4-Dimethylphenol	%	56		25-140	Pass	
2,4-Dinitrophenol	%	91		25-140	Pass	
2-Methylphenol (o-Cresol)	%	54		25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	61		25-140	Pass	
4-Nitrophenol	%	73		25-140	Pass	
Dinoseb	%	107		25-140	Pass	
Phenol	%	49		25-140	Pass	
LCS - % Recovery						
Chromium (hexavalent)	%	86		70-130	Pass	
Cyanide (total)	%	101		70-130	Pass	
Fluoride (Total)	%	101		70-130	Pass	
LCS - % Recovery						
Heavy Metals						
Arsenic	%	104		80-120	Pass	
Cadmium	%	102		80-120	Pass	
Chromium	%	104		80-120	Pass	
Copper	%	103		80-120	Pass	
Lead	%	115		80-120	Pass	
Mercury	%	80		80-120	Pass	
Molybdenum	%	107		80-120	Pass	
Nickel	%	100		80-120	Pass	
Selenium	%	101		80-120	Pass	
Silver	%	107		80-120	Pass	
Tin	%	105		80-120	Pass	
Zinc	%	106		80-120	Pass	
LCS - % Recovery						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	%	102		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	99		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	105		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	109		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	96		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	107		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	119		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	120		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	110		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	136		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	115		50-150	Pass	
LCS - % Recovery						
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)	%	119		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	117		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	91		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	120		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	118		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	107		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	146			50-150	Pass		
LCS - % Recovery								
Perfluoroalkyl sulfonic acids (PFSA's)								
Perfluorobutanesulfonic acid (PFBS)	%	98			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	128			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	124			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	85			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	79			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	52			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	121			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	114			50-150	Pass		
LCS - % Recovery								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	111			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	91			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)	%	116			50-150	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
Total Recoverable Hydrocarbons				Result 1				
TRH C6-C9	M22-Ma29950	NCP	%	117		70-130	Pass	
TRH C10-C14	M22-Ma22344	NCP	%	113		70-130	Pass	
Naphthalene	M22-Ma29950	NCP	%	86		70-130	Pass	
TRH C6-C10	M22-Ma29950	NCP	%	118		70-130	Pass	
TRH >C10-C16	M22-Ma22344	NCP	%	114		70-130	Pass	
Spike - % Recovery								
Volatile Organics				Result 1				
1.1-Dichloroethene	M22-Ma29950	NCP	%	90		70-130	Pass	
1.1.1-Trichloroethane	M22-Ma29950	NCP	%	93		70-130	Pass	
1.2-Dichlorobenzene	M22-Ma29950	NCP	%	74		70-130	Pass	
1.2-Dichloroethane	M22-Ma29950	NCP	%	86		70-130	Pass	
Benzene	M22-Ma29950	NCP	%	84		70-130	Pass	
Ethylbenzene	M22-Ma29950	NCP	%	74		70-130	Pass	
m&p-Xylenes	M22-Ma29950	NCP	%	73		70-130	Pass	
o-Xylene	M22-Ma29950	NCP	%	80		70-130	Pass	
Toluene	M22-Ma29950	NCP	%	76		70-130	Pass	
Trichloroethene	M22-Ma29950	NCP	%	79		70-130	Pass	
Xylenes - Total*	M22-Ma29950	NCP	%	75		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	L22-Ma24371	NCP	%	86		70-130	Pass	
Acenaphthylene	L22-Ma24371	NCP	%	106		70-130	Pass	
Anthracene	L22-Ma24371	NCP	%	97		70-130	Pass	
Benz(a)anthracene	L22-Ma24371	NCP	%	94		70-130	Pass	
Benzo(a)pyrene	L22-Ma24371	NCP	%	93		70-130	Pass	
Benzo(b&j)fluoranthene	L22-Ma24371	NCP	%	92		70-130	Pass	
Benzo(g,h,i)perylene	L22-Ma24371	NCP	%	101		70-130	Pass	
Benzo(k)fluoranthene	L22-Ma24371	NCP	%	87		70-130	Pass	
Chrysene	L22-Ma24371	NCP	%	98		70-130	Pass	
Dibenz(a,h)anthracene	L22-Ma24371	NCP	%	90		70-130	Pass	
Fluoranthene	L22-Ma24371	NCP	%	84		70-130	Pass	
Fluorene	L22-Ma24371	NCP	%	105		70-130	Pass	
Indeno(1.2.3-cd)pyrene	L22-Ma24371	NCP	%	83		70-130	Pass	
Naphthalene	L22-Ma24371	NCP	%	89		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Phenanthrene	L22-Ma24371	NCP	%	101		70-130	Pass	
Pyrene	L22-Ma24371	NCP	%	84		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	B22-Ma16188	NCP	%	109		70-130	Pass	
4.4'-DDD	B22-Ma16188	NCP	%	116		70-130	Pass	
4.4'-DDE	B22-Ma16188	NCP	%	115		70-130	Pass	
4.4'-DDT	B22-Ma16188	NCP	%	113		70-130	Pass	
a-HCH	B22-Ma16188	NCP	%	87		70-130	Pass	
Aldrin	B22-Ma16188	NCP	%	101		70-130	Pass	
b-HCH	B22-Ma16188	NCP	%	96		70-130	Pass	
d-HCH	B22-Ma16188	NCP	%	93		70-130	Pass	
Dieldrin	B22-Ma16188	NCP	%	90		70-130	Pass	
Endosulfan I	B22-Ma16188	NCP	%	88		70-130	Pass	
Endosulfan II	B22-Ma16188	NCP	%	101		70-130	Pass	
Endosulfan sulphate	B22-Ma16188	NCP	%	98		70-130	Pass	
Endrin	B22-Ma16188	NCP	%	109		70-130	Pass	
Endrin ketone	B22-Ma16188	NCP	%	90		70-130	Pass	
g-HCH (Lindane)	B22-Ma16188	NCP	%	105		70-130	Pass	
Heptachlor	B22-Ma16188	NCP	%	117		70-130	Pass	
Heptachlor epoxide	B22-Ma16188	NCP	%	98		70-130	Pass	
Methoxychlor	B22-Ma16188	NCP	%	109		70-130	Pass	
Spike - % Recovery								
Polychlorinated Biphenyls				Result 1				
Aroclor-1016	M22-Ma22344	NCP	%	87		70-130	Pass	
Aroclor-1260	M22-Ma22344	NCP	%	110		70-130	Pass	
Spike - % Recovery								
Phenols (Halogenated)				Result 1				
2-Chlorophenol	L22-Ma24371	NCP	%	49		30-130	Pass	
2.4-Dichlorophenol	L22-Ma24371	NCP	%	57		30-130	Pass	
2.4.5-Trichlorophenol	L22-Ma24371	NCP	%	62		30-130	Pass	
2.4.6-Trichlorophenol	L22-Ma24371	NCP	%	37		30-130	Pass	
2.6-Dichlorophenol	L22-Ma24371	NCP	%	54		30-130	Pass	
4-Chloro-3-methylphenol	L22-Ma24371	NCP	%	42		30-130	Pass	
Pentachlorophenol	L22-Ma24371	NCP	%	61		30-130	Pass	
Tetrachlorophenols - Total	L22-Ma24371	NCP	%	34		30-130	Pass	
Spike - % Recovery								
Phenols (non-Halogenated)				Result 1				
2-Cyclohexyl-4.6-dinitrophenol	M22-Ma18619	NCP	%	58		30-130	Pass	
2-Methyl-4.6-dinitrophenol	M22-Ma18619	NCP	%	52		30-130	Pass	
2-Nitrophenol	L22-Ma24371	NCP	%	34		30-130	Pass	
2.4-Dimethylphenol	L22-Ma24371	NCP	%	49		30-130	Pass	
2.4-Dinitrophenol	M22-Ma18619	NCP	%	35		30-130	Pass	
2-Methylphenol (o-Cresol)	L22-Ma24371	NCP	%	41		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	L22-Ma24371	NCP	%	46		30-130	Pass	
4-Nitrophenol	L22-Ma24371	NCP	%	34		30-130	Pass	
Dinoseb	L22-Ma24371	NCP	%	36		30-130	Pass	
Phenol	L22-Ma24371	NCP	%	39		30-130	Pass	
Spike - % Recovery								
				Result 1				
Chromium (hexavalent)	M22-Ma39009	NCP	%	75		70-130	Pass	
Cyanide (total)	M22-Ma21979	NCP	%	107		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Chromium	M22-Ma33155	NCP	%	113		75-125	Pass	
Spike - % Recovery								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1				
Perfluorobutanoic acid (PFBA)	M22-Ma25051	NCP	%	97		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma25051	NCP	%	96		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma25051	NCP	%	98		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma25051	NCP	%	102		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma25051	NCP	%	107		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma25051	NCP	%	110		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma25051	NCP	%	127		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma25051	NCP	%	109		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma25051	NCP	%	107		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	M22-Ma25051	NCP	%	123		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma25051	NCP	%	114		50-150	Pass	
Spike - % Recovery								
Perfluoroalkyl sulfonamido substances				Result 1				
Perfluorooctane sulfonamide (FOSA)	M22-Ma25051	NCP	%	113		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma25051	NCP	%	116		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma25051	NCP	%	87		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma25051	NCP	%	108		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma25051	NCP	%	104		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma25051	NCP	%	112		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma25051	NCP	%	129		50-150	Pass	
Spike - % Recovery								
Perfluoroalkyl sulfonic acids (PFSA's)				Result 1				
Perfluorobutanesulfonic acid (PFBS)	M22-Ma25051	NCP	%	93		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ma25051	NCP	%	114		50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma25051	NCP	%	121		50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma25051	NCP	%	78		50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma25051	NCP	%	80		50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma25051	NCP	%	57		50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ma25051	NCP	%	111		50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ma25051	NCP	%	115		50-150	Pass	
Spike - % Recovery								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)				Result 1				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma25051	NCP	%	99		50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma25051	NCP	%	123		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma25051	NCP	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma25051	NCP	%	115			50-150	Pass	
Spike - % Recovery									
				Result 1					
Fluoride (Total)	M22-Ma31649	CP	%	92			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M22-Ma31652	CP	%	96			75-125	Pass	
Cadmium	M22-Ma31652	CP	%	106			75-125	Pass	
Copper	M22-Ma31652	CP	%	120			75-125	Pass	
Lead	M22-Ma31652	CP	%	115			75-125	Pass	
Mercury	M22-Ma31652	CP	%	118			75-125	Pass	
Molybdenum	M22-Ma31652	CP	%	110			75-125	Pass	
Nickel	M22-Ma31652	CP	%	114			75-125	Pass	
Selenium	M22-Ma31652	CP	%	89			75-125	Pass	
Silver	M22-Ma31652	CP	%	110			75-125	Pass	
Tin	M22-Ma31652	CP	%	117			75-125	Pass	
Zinc	M22-Ma31652	CP	%	89			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M22-Ma25130	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	M22-Ma22343	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M22-Ma25130	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Hexachlorobutadiene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Benzene	M22-Ma25130	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Bromobenzene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1,2-Dichloroethene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1,3-Dichloropropene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	M22-Ma25130	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	M22-Ma25130	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	M22-Ma25130	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	M22-Ma25130	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1,2-Dichloroethene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,3-Dichloropropene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-Ma25130	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total*	M22-Ma25130	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Cyanide (total)	M22-Ma25021	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Fluoride (Total)	M22-Ma37914	NCP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotridecanoic acid (PFTTrDA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma28343	NCP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma28343	NCP	ug/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA's)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma28343	NCP	ug/kg	< 10	< 10	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma28343	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Ma31647	CP	pH Units	8.0	8.0	pass	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M22-Ma31649	CP	mg/kg	27	29	5.0	30%	Pass
Cadmium	M22-Ma31649	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M22-Ma31649	CP	mg/kg	150	150	1.0	30%	Pass
Copper	M22-Ma31649	CP	mg/kg	63	62	2.0	30%	Pass
Lead	M22-Ma31649	CP	mg/kg	6.3	5.9	8.0	30%	Pass
Mercury	M22-Ma31649	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M22-Ma31649	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M22-Ma31649	CP	mg/kg	170	170	1.0	30%	Pass
Selenium	M22-Ma31649	CP	mg/kg	< 2	< 2	<1	30%	Pass

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Silver	M22-Ma31649	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-Ma31649	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M22-Ma31649	CP	mg/kg	100	110	9.0	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	M22-Ma31652	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M22-Ma31652	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M22-Ma31652	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	M22-Ma31652	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M22-Ma31652	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M22-Ma31652	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)anthracene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M22-Ma31652	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-Ma31652	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M22-Ma31652	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-Ma31652	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-Ma31652	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-Ma31652	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-Ma31652	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-Ma31652	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-Ma31652	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-Ma31652	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M22-Ma31652	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M22-Ma31652	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-Ma31652	CP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-Ma31652	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-Ma31652	CP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	M22-Ma31652	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M22-Ma31652	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-Ma31652	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	M22-Ma31652	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-Ma31652	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-Ma31652	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M22-Ma31652	CP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-Ma31652	CP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-Ma31652	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M22-Ma31652	CP	mg/kg	26	25	4.0	30%	Pass
Cadmium	M22-Ma31652	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M22-Ma31652	CP	mg/kg	140	150	3.0	30%	Pass
Copper	M22-Ma31652	CP	mg/kg	61	62	2.0	30%	Pass
Lead	M22-Ma31652	CP	mg/kg	5.6	5.8	2.0	30%	Pass
Mercury	M22-Ma31652	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M22-Ma31652	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M22-Ma31652	CP	mg/kg	170	180	3.0	30%	Pass
Selenium	M22-Ma31652	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M22-Ma31652	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-Ma31652	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M22-Ma31652	CP	mg/kg	120	120	1.0	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	M22-Ma31653	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M22-Ma31653	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M22-Ma31653	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	M22-Ma31653	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M22-Ma31653	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M22-Ma31653	CP	mg/kg	< 100	< 100	<1	30%	Pass

Duplicate				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-Ma31653	CP	mg/kg	< 1	< 1	<1	30%	Pass
% Moisture	M22-Ma31653	CP	%	35	34	1.0	30%	Pass
Duplicate				Result 1	Result 2	RPD		
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Ma31654	CP	pH Units	8.9	8.9	pass	30%	Pass

Comments

Eurofins | Environment Testing accreditation number 1261, site 18217 is currently in progress of a controlled transition to a new custom built location at 179 Magowar Road, Girraween, NSW 2145. All results on this report denoted as being performed by Eurofins | Environment Testing Unit F3, Building F, 16 Mars road, Lane Cove West, NSW 2066, corporate site 18217, will have been performed on either Lane Cove or new Girraween site

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
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
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
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:

Michael Cassidy	Analytical Services Manager
Vivian Wang	Senior Analyst-Volatile (VIC)
Scott Beddoes	Senior Analyst-Inorganic (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Emily Rosenberg	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-PFAS (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

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Agon Environmental Pty Ltd - VIC
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SA 5063



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: **David Lawson**

Report **871571-L**
Project name **20220316073519-Eurofin-20**
Project ID **JC0927**
Received Date **Mar 16, 2022**

Client Sample ID			SX_20220315_07_58_SS_Pri mary_EUF	SX_20220315_08_06_SS_Trip licate_EUF	SX_20220315_11_56_SS_Pri mary_EUF	SX_20220315_15_56_SS_Pri mary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0
Eurofins Sample No.			M22-Ma31655	M22-Ma31656	M22-Ma31657	M22-Ma31658
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 15, 2022	Mar 15, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{C01}		comment	1.0	1.0	1.0	1.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	5.1	5.1	5.1	5.1
pH (off)	0.1	pH Units	5.1	5.2	5.2	5.3
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 (PFTeDA) ^{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	%	114	114	113	113
13C5-PFPeA (surr.)	1	%	108	106	109	101
13C5-PFHxA (surr.)	1	%	109	109	100	102
13C4-PFHpA (surr.)	1	%	120	119	108	112
13C8-PFOA (surr.)	1	%	115	66	66	55
13C5-PFNA (surr.)	1	%	112	120	104	96
13C6-PFDA (surr.)	1	%	98	116	92	77
13C2-PFUnDA (surr.)	1	%	87	91	76	54
13C2-PFDoDA (surr.)	1	%	68	78	64	39
13C2-PFTeDA (surr.)	1	%	52	67	59	30
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

Client Sample ID			SX_20220315_07_58_SS_Primary_EUF	SX_20220315_08_06_SS_Triplicate_EUF	SX_20220315_11_56_SS_Primary_EUF	SX_20220315_15_56_SS_Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0
Eurofins Sample No.			M22-Ma31655	M22-Ma31656	M22-Ma31657	M22-Ma31658
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 15, 2022	Mar 15, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
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	114	97	106
D3-N-MeFOSA (surr.)	1	%	91	91	73	69
D5-N-EtFOSA (surr.)	1	%	86	84	66	66
D7-N-MeFOSE (surr.)	1	%	107	110	93	111
D9-N-EtFOSE (surr.)	1	%	104	103	92	101
D5-N-EtFOSAA (surr.)	1	%	91	87	75	54
D3-N-MeFOSAA (surr.)	1	%	101	106	74	58
Perfluoroalkyl sulfonic acids (PFASs)						
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	%	99	103	100	90
18O2-PFHxS (surr.)	1	%	102	100	99	87
13C8-PFOS (surr.)	1	%	107	113	94	73
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 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	%	93	97	91	93
13C2-6:2 FTSA (surr.)	1	%	111	124	120	118
13C2-8:2 FTSA (surr.)	1	%	102	118	98	90
13C2-10:2 FTSA (surr.)	1	%	94	103	80	54
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			SX_20220315_15_57_SS_Duplicate_EUF	SX_20220315_20_54_SS_Priary_EUF	SX_20220316_00_08_SS_Priary_EUF	SX_20220316_04_23_SS_Priary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0
Eurofins Sample No.			M22-Ma31659	M22-Ma31660	M22-Ma31661	M22-Ma31662
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 16, 2022	Mar 16, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{C01}		comment	1.0	1.0	1.0	1.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	5.1	5.1	5.1	5.1
pH (off)	0.1	pH Units	5.2	5.2	5.2	5.1
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 (PFTTrDA) ^{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	%	112	115	113	108
13C5-PFPeA (surr.)	1	%	108	103	101	102
13C5-PFHxA (surr.)	1	%	96	106	103	104
13C4-PFHpA (surr.)	1	%	103	119	117	114
13C8-PFOA (surr.)	1	%	57	77	80	74
13C5-PFNA (surr.)	1	%	87	116	106	114
13C6-PFDA (surr.)	1	%	68	104	95	100
13C2-PFUnDA (surr.)	1	%	57	85	79	88
13C2-PFDoDA (surr.)	1	%	48	70	61	77
13C2-PFTeDA (surr.)	1	%	39	58	52	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	%	78	111	101	108
D3-N-MeFOSA (surr.)	1	%	58	70	75	106
D5-N-EtFOSA (surr.)	1	%	53	65	69	103
D7-N-MeFOSE (surr.)	1	%	81	105	101	112
D9-N-EtFOSE (surr.)	1	%	77	103	97	111
D5-N-EtFOSAA (surr.)	1	%	46	87	58	83
D3-N-MeFOSAA (surr.)	1	%	59	101	69	86

Client Sample ID			SX_20220315_15_57_SS_Duplicate_EUF	SX_20220315_20_54_SS_Primary_EUF	SX_20220316_00_08_SS_Primary_EUF	SX_20220316_04_23_SS_Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0
Eurofins Sample No.			M22-Ma31659	M22-Ma31660	M22-Ma31661	M22-Ma31662
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 16, 2022	Mar 16, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFASs)						
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	%	98	97	95	97
18O2-PFHxS (surr.)	1	%	89	102	106	100
13C8-PFOS (surr.)	1	%	75	102	94	106
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 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	%	89	95	95	93
13C2-6:2 FTSA (surr.)	1	%	105	124	127	110
13C2-8:2 FTSA (surr.)	1	%	81	107	100	101
13C2-10:2 FTSA (surr.)	1	%	54	83	71	99
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			SX_20220315_07_58_SS_Primary_EUF	SX_20220315_08_06_SS_Triplicate_EUF	SX_20220315_11_56_SS_Primary_EUF	SX_20220315_15_56_SS_Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-Ma31663	M22-Ma31664	M22-Ma31665	M22-Ma31666
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 15, 2022	Mar 15, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{C01}		comment	4.0	4.0	4.0	4.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	6.2	6.2	6.2	6.2
pH (off)	0.1	pH Units	8.5	8.8	9.0	9.0

Client Sample ID			SX_20220315_07_58_SS_Primary_EUF	SX_20220315_08_06_SS_Triplicate_EUF	SX_20220315_11_56_SS_Primary_EUF	SX_20220315_15_56_SS_Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-Ma31663	M22-Ma31664	M22-Ma31665	M22-Ma31666
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 15, 2022	Mar 15, 2022
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	%	98	97	92	92
13C5-PFPeA (surr.)	1	%	97	84	87	95
13C5-PFHxA (surr.)	1	%	96	92	89	88
13C4-PFHpA (surr.)	1	%	113	107	102	105
13C8-PFOA (surr.)	1	%	108	61	68	72
13C5-PFNA (surr.)	1	%	115	109	98	109
13C6-PFDA (surr.)	1	%	122	103	103	110
13C2-PFUnDA (surr.)	1	%	127	102	95	116
13C2-PFDoDA (surr.)	1	%	120	110	97	119
13C2-PFTeDA (surr.)	1	%	116	105	100	167
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	%	105	101	94	93
D3-N-MeFOSA (surr.)	1	%	70	65	76	72
D5-N-EtFOSA (surr.)	1	%	63	61	72	68
D7-N-MeFOSE (surr.)	1	%	102	106	100	107
D9-N-EtFOSE (surr.)	1	%	98	100	96	100
D5-N-EtFOSAA (surr.)	1	%	137	118	129	172
D3-N-MeFOSAA (surr.)	1	%	117	102	122	147
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

Client Sample ID			SX_20220315_07_58_SS_Primary_EUF	SX_20220315_08_06_SS_Triplicate_EUF	SX_20220315_11_56_SS_Primary_EUF	SX_20220315_15_56_SS_Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-Ma31663	M22-Ma31664	M22-Ma31665	M22-Ma31666
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 15, 2022	Mar 15, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFASs)						
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	%	102	97	95	99
18O2-PFHxS (surr.)	1	%	105	100	96	105
13C8-PFOS (surr.)	1	%	119	111	111	116
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 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	%	83	82	75	81
13C2-6:2 FTSA (surr.)	1	%	106	110	101	103
13C2-8:2 FTSA (surr.)	1	%	108	108	109	103
13C2-10:2 FTSA (surr.)	1	%	149	114	110	131
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			SX_20220315_15_57_SS_Duplicate_EUF	SX_20220315_20_54_SS_Primary_EUF	SX_20220316_00_08_SS_Primary_EUF	SX_20220316_04_23_SS_Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-Ma31667	M22-Ma31668	M22-Ma31669	M22-Ma31670
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 16, 2022	Mar 16, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{C01}		comment	4.0	4.0	4.0	4.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	6.2	6.2	6.2	6.2
pH (off)	0.1	pH Units	8.9	9.1	9.2	9.1
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

Client Sample ID			SX_20220315_15_57_SS_Duplicate_EUF	SX_20220315_20_54_SS_Primary_EUF	SX_20220316_00_08_SS_Primary_EUF	SX_20220316_04_23_SS_Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-Ma31667	M22-Ma31668	M22-Ma31669	M22-Ma31670
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 16, 2022	Mar 16, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
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	%	65	97	87	104
13C5-PFPeA (surr.)	1	%	68	91	79	100
13C5-PFHxA (surr.)	1	%	65	91	83	97
13C4-PFHpA (surr.)	1	%	80	99	99	104
13C8-PFOA (surr.)	1	%	52	69	81	77
13C5-PFNA (surr.)	1	%	88	100	107	100
13C6-PFDA (surr.)	1	%	92	90	101	92
13C2-PFUnDA (surr.)	1	%	103	91	110	91
13C2-PFDoDA (surr.)	1	%	101	91	121	95
13C2-PFTeDA (surr.)	1	%	83	109	123	99
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	%	92	90	112	86
D3-N-MeFOSA (surr.)	1	%	59	61	97	49
D5-N-EtFOSA (surr.)	1	%	57	56	86	43
D7-N-MeFOSE (surr.)	1	%	97	90	113	82
D9-N-EtFOSE (surr.)	1	%	92	86	106	81
D5-N-EtFOSAA (surr.)	1	%	114	89	114	77
D3-N-MeFOSAA (surr.)	1	%	106	80	103	88
Perfluoroalkyl sulfonic acids (PFSA)						
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	%	90	90	95	98
18O2-PFHxS (surr.)	1	%	103	93	101	98
13C8-PFOS (surr.)	1	%	110	99	112	97

Client Sample ID			SX_20220315_15_57_SS_Duplicate_EUF	SX_20220315_20_54_SS_Primary_EUF	SX_20220316_00_08_SS_Primary_EUF	SX_20220316_04_23_SS_Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-Ma31667	M22-Ma31668	M22-Ma31669	M22-Ma31670
Date Sampled			Mar 15, 2022	Mar 15, 2022	Mar 16, 2022	Mar 16, 2022
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 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	82	69	87
13C2-6:2 FTSA (surr.)	1	%	81	102	100	101
13C2-8:2 FTSA (surr.)	1	%	91	95	96	97
13C2-10:2 FTSA (surr.)	1	%	116	112	142	118
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

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
AUS Leaching Procedure			
pH (initial) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Mar 17, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Mar 17, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Mar 17, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 17, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 17, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 17, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 17, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 16, 2022	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 16, 2022 12:50 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	871571	Due:	Mar 23, 2022
Project Name:	20220316073519-Eurofin-20	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_20220315_07_58_SS_Primary_EUF	Mar 15, 2022	7:58AM	Soil	M22-Ma31645		X	X	X
2	SX_20220315_08_06_SS_Triplicate_EUF	Mar 15, 2022	8:06AM	Soil	M22-Ma31646		X	X	X
3	SX_20220315_11_56_SS_Primary_EUF	Mar 15, 2022	11:56AM	Soil	M22-Ma31647		X	X	X
4	SX_20220315_15_56_SS_Primary_EUF	Mar 15, 2022	3:56PM	Soil	M22-Ma31648		X	X	X

Company Name: Agon Environmental Pty Ltd - VIC
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063
Project Name: 20220316073519-Eurofin-20
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Received: Mar 16, 2022 12:50 PM
Due: Mar 23, 2022
Priority: 5 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
5	SX_20220315_15_57_SS_Duplicate_EUF	Mar 15, 2022	3:57PM	Soil	M22-Ma31649		X	X	X
6	SX_20220315_16_26_SR_Rinsate_EUF	Mar 15, 2022	4:26PM	Water	M22-Ma31650			X	
7	SX_20220315_16_27_SB_Blink_EUF	Mar 15, 2022	4:27PM	Water	M22-Ma31651			X	
8	SX_20220315_20_54_SS_Primary_EUF	Mar 15, 2022	8:54PM	Soil	M22-Ma31652		X	X	X
9	SX_20220316_00_08_SS_P	Mar 16, 2022	12:08AM	Soil	M22-Ma31653		X	X	X

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 16, 2022 12:50 PM
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Project Name:	20220316073519-Eurofin-20	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFAS)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	_00_08_SS_Primary_EUF								
10	SX_20220316_04_23_SS_Primary_EUF	Mar 16, 2022	4:23AM	Soil	M22-Ma31654		X	X	X
11	SX_20220315_07_58_SS_Primary_EUF	Mar 15, 2022	7:58AM	AUS Leachate - pH 5.0	M22-Ma31655	X		X	
12	SX_20220315_08_06_SS_Triplicate_EUF	Mar 15, 2022	8:06AM	AUS Leachate - pH 5.0	M22-Ma31656	X		X	
13	SX_20220315_11_56_SS_Primary_EUF	Mar 15, 2022	11:56AM	AUS Leachate - pH 5.0	M22-Ma31657	X		X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 16, 2022 12:50 PM
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Project Name:	20220316073519-Eurofin-20	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
14	SX_20220315_15_56_SS_Primary_EUF	Mar 15, 2022	3:56PM	AUS Leachate - pH 5.0	M22-Ma31658	X		X	
15	SX_20220315_15_57_SS_Duplicate_EUF	Mar 15, 2022	3:57PM	AUS Leachate - pH 5.0	M22-Ma31659	X		X	
16	SX_20220315_20_54_SS_Primary_EUF	Mar 15, 2022	8:54PM	AUS Leachate - pH 5.0	M22-Ma31660	X		X	
17	SX_20220316_00_08_SS_Primary_EUF	Mar 16, 2022	12:08AM	AUS Leachate - pH 5.0	M22-Ma31661	X		X	
18	SX_20220316_04_23_SS_P	Mar 16, 2022	4:23AM	AUS Leachate - pH 5.0	M22-Ma31662	X		X	

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Project Name: 20220316073519-Eurofin-20
Project ID: JC0927

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
					- pH 5.0				
19	SX_20220315_07_58_SS_Primary_EUF	Mar 15, 2022	7:58AM	AUS Leachate - Reagent Water	M22-Ma31663	X		X	
20	SX_20220315_08_06_SS_Triplicate_EUF	Mar 15, 2022	8:06AM	AUS Leachate - Reagent Water	M22-Ma31664	X		X	
21	SX_20220315_11_56_SS_Primary_EUF	Mar 15, 2022	11:56AM	AUS Leachate - Reagent Water	M22-Ma31665	X		X	
22	SX_20220315_15_56_SS_Primary_EUF	Mar 15, 2022	3:56PM	AUS Leachate - Reagent Water	M22-Ma31666	X		X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 16, 2022 12:50 PM
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Project Name:	20220316073519-Eurofin-20	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
23	SX_20220315_15_57_SS_Duplicate_EUF	Mar 15, 2022	3:57PM	AUS Leachate - Reagent Water	M22-Ma31667	X		X	
24	SX_20220315_20_54_SS_Primary_EUF	Mar 15, 2022	8:54PM	AUS Leachate - Reagent Water	M22-Ma31668	X		X	
25	SX_20220316_00_08_SS_Primary_EUF	Mar 16, 2022	12:08AM	AUS Leachate - Reagent Water	M22-Ma31669	X		X	
26	SX_20220316_04_23_SS_Primary_EUF	Mar 16, 2022	4:23AM	AUS Leachate - Reagent Water	M22-Ma31670	X		X	
Test Counts						16	8	26	8

Internal Quality Control Review and Glossary

General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- This report replaces any interim results previously issued.

Holding Times

Please refer to '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 prior to sample receipt deadlines as stated on the SRA.

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

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

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre	µg/L: micrograms per litre
ppm: parts per million	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

Terms

APHA	American Public Health Association
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 a moisture has been determined on a solid sample the result is expressed on a dry 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 is representative of 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 like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (<i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
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 be used as a guide only 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

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

- Where a result is reported as a 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.
- 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 is not data from your samples.
- 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.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
- For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- 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 (PFTTrDA)	ug/L	< 0.01		0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01		0.01	Pass	
Method Blank						
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05		0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05		0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05		0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	< 0.05		0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05		0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05		0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05		0.05	Pass	
Method Blank						
Perfluoroalkyl sulfonic acids (PFASs)						
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 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01		0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05		0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01		0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01		0.01	Pass	
LCS - % Recovery						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	%	112		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	135		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	105		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	94		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	122		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	119		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	117		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	118		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	114		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	146		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	96		50-150	Pass	

Test		Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
LCS - % Recovery									
Perfluoroalkyl sulfonamido substances									
Perfluorooctane sulfonamide (FOSA)		%	109			50-150	Pass		
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)		%	99			50-150	Pass		
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)		%	108			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)		%	107			50-150	Pass		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)		%	100			50-150	Pass		
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)		%	80			50-150	Pass		
LCS - % Recovery									
Perfluoroalkyl sulfonic acids (PFSA)									
Perfluorobutanesulfonic acid (PFBS)		%	105			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)		%	89			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)		%	99			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)		%	102			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)		%	115			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)		%	146			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)		%	109			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)		%	56			50-150	Pass		
LCS - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)		%	111			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)		%	104			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)		%	129			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)		%	118			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)	M22-Ma31660	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTTrDA)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTTeDA)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances									
				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M22-Ma31660	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma31660	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma31660	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma31660	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma31660	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)	M22-Ma31660	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma31660	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA's)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma31660	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma31660	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Ma31668	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ma31668	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma31668	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma31668	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma31668	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma31668	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma31668	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma31668	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma31668	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma31668	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass

Comments

Eurofins | Environment Testing accreditation number 1261, site 18217 is currently in progress of a controlled transition to a new custom built location at 179 Magowar Road, Girraween, NSW 2145. All results on this report denoted as being performed by Eurofins | Environment Testing Unit F3, Building F, 16 Mars road, Lane Cove West, NSW 2066, corporate site 18217, will have been performed on either Lane Cove or new Girraween site

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
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
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other
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:

Michael Cassidy	Analytical Services Manager
Joseph Edouard	Senior Analyst-PFAS (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

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Agon Environmental Pty Ltd - VIC
3/224 Glen Osmond Road
Fullarton
SA 5063



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: **David Lawson**

Report **871571-W**
Project name **20220316073519-Eurofin-20**
Project ID **JC0927**
Received Date **Mar 16, 2022**

Client Sample ID			SX_20220315_16_26_SR_Rin_sate_EUF	SX_20220315_16_27_SB_Bla_nk_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22-Ma31650	M22-Ma31651
Date Sampled			Mar 15, 2022	Mar 15, 2022
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 (PFTTrDA) ^{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	%	84	92
13C5-PFPeA (surr.)	1	%	105	108
13C5-PFHxA (surr.)	1	%	83	93
13C4-PFHpA (surr.)	1	%	81	91
13C8-PFOA (surr.)	1	%	77	92
13C5-PFNA (surr.)	1	%	66	86
13C6-PFDA (surr.)	1	%	83	110
13C2-PFUnDA (surr.)	1	%	51	80
13C2-PFDoDA (surr.)	1	%	47	75
13C2-PFTeDA (surr.)	1	%	58	91
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	%	46	66
D3-N-MeFOSA (surr.)	1	%	20	16

Client Sample ID			SX_20220315_16_26_SR_Rin_sate_EUF	SX_20220315_16_27_SB_Bla_nk_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22-Ma31650	M22-Ma31651
Date Sampled			Mar 15, 2022	Mar 15, 2022
Test/Reference	LOR	Unit		
Perfluoroalkyl sulfonamido substances				
D5-N-EtFOSA (surr.)	1	%	21	16
D7-N-MeFOSE (surr.)	1	%	40	50
D9-N-EtFOSE (surr.)	1	%	38	50
D5-N-EtFOSAA (surr.)	1	%	37	71
D3-N-MeFOSAA (surr.)	1	%	46	75
Perfluoroalkyl sulfonic acids (PFASs)				
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) ^{N15}	0.01	ug/L	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	0.01	ug/L	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	111	119
18O2-PFHxS (surr.)	1	%	90	104
13C8-PFOS (surr.)	1	%	81	106
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	97	112
13C2-6:2 FTSA (surr.)	1	%	76	103
13C2-8:2 FTSA (surr.)	1	%	77	96
13C2-10:2 FTSA (surr.)	1	%	54	80
PFASs Summations				
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Melbourne	Mar 16, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Mar 16, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Mar 16, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Mar 16, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Mar 16, 2022	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 16, 2022 12:50 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	871571	Due:	Mar 23, 2022
Project Name:	20220316073519-Eurofin-20	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFAS)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_20220315_07_58_SS_Primary_EUF	Mar 15, 2022	7:58AM	Soil	M22-Ma31645		X	X	X
2	SX_20220315_08_06_SS_Triplicate_EUF	Mar 15, 2022	8:06AM	Soil	M22-Ma31646		X	X	X
3	SX_20220315_11_56_SS_Primary_EUF	Mar 15, 2022	11:56AM	Soil	M22-Ma31647		X	X	X
4	SX_20220315_15_56_SS_Primary_EUF	Mar 15, 2022	3:56PM	Soil	M22-Ma31648		X	X	X

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
5	SX_20220315_15_57_SS_Duplicate_EUF	Mar 15, 2022	3:57PM	Soil	M22-Ma31649		X	X	X
6	SX_20220315_16_26_SR_Rinsate_EUF	Mar 15, 2022	4:26PM	Water	M22-Ma31650			X	
7	SX_20220315_16_27_SB_Blink_EUF	Mar 15, 2022	4:27PM	Water	M22-Ma31651			X	
8	SX_20220315_20_54_SS_Primary_EUF	Mar 15, 2022	8:54PM	Soil	M22-Ma31652		X	X	X
9	SX_20220316_00_08_SS_P	Mar 16, 2022	12:08AM	Soil	M22-Ma31653		X	X	X

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Project ID:	JC0927	Fax:		Contact Name:	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFAS)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	_00_08_SS_Primary_EUF								
10	SX_20220316_04_23_SS_Primary_EUF	Mar 16, 2022	4:23AM	Soil	M22-Ma31654		X	X	X
11	SX_20220315_07_58_SS_Primary_EUF	Mar 15, 2022	7:58AM	AUS Leachate - pH 5.0	M22-Ma31655	X		X	
12	SX_20220315_08_06_SS_Triplicate_EUF	Mar 15, 2022	8:06AM	AUS Leachate - pH 5.0	M22-Ma31656	X		X	
13	SX_20220315_11_56_SS_Primary_EUF	Mar 15, 2022	11:56AM	AUS Leachate - pH 5.0	M22-Ma31657	X		X	

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Project Name: 20220316073519-Eurofin-20
Project ID: JC0927

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
14	SX_20220315_15_56_SS_Primary_EUF	Mar 15, 2022	3:56PM	AUS Leachate - pH 5.0	M22-Ma31658	X		X	
15	SX_20220315_15_57_SS_Duplicate_EUF	Mar 15, 2022	3:57PM	AUS Leachate - pH 5.0	M22-Ma31659	X		X	
16	SX_20220315_20_54_SS_Primary_EUF	Mar 15, 2022	8:54PM	AUS Leachate - pH 5.0	M22-Ma31660	X		X	
17	SX_20220316_00_08_SS_Primary_EUF	Mar 16, 2022	12:08AM	AUS Leachate - pH 5.0	M22-Ma31661	X		X	
18	SX_20220316_04_23_SS_P	Mar 16, 2022	4:23AM	AUS Leachate - pH 5.0	M22-Ma31662	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	_04_23_SS_Primary_EUF			- pH 5.0					
19	SX_20220315_07_58_SS_Primary_EUF	Mar 15, 2022	7:58AM	AUS Leachate - Reagent Water	M22-Ma31663	X		X	
20	SX_20220315_08_06_SS_Triplicate_EUF	Mar 15, 2022	8:06AM	AUS Leachate - Reagent Water	M22-Ma31664	X		X	
21	SX_20220315_11_56_SS_Primary_EUF	Mar 15, 2022	11:56AM	AUS Leachate - Reagent Water	M22-Ma31665	X		X	
22	SX_20220315_15_56_SS_Primary_EUF	Mar 15, 2022	3:56PM	AUS Leachate - Reagent Water	M22-Ma31666	X		X	

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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
23	SX_20220315_15_57_SS_Duplicate_EUF	Mar 15, 2022	3:57PM	AUS Leachate - Reagent Water	M22-Ma31667	X		X	
24	SX_20220315_20_54_SS_Primary_EUF	Mar 15, 2022	8:54PM	AUS Leachate - Reagent Water	M22-Ma31668	X		X	
25	SX_20220316_00_08_SS_Primary_EUF	Mar 16, 2022	12:08AM	AUS Leachate - Reagent Water	M22-Ma31669	X		X	
26	SX_20220316_04_23_SS_Primary_EUF	Mar 16, 2022	4:23AM	AUS Leachate - Reagent Water	M22-Ma31670	X		X	
Test Counts						16	8	26	8

Internal Quality Control Review and Glossary

General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- This report replaces any interim results previously issued.

Holding Times

Please refer to '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 prior to sample receipt deadlines as stated on the SRA.

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

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

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre	µg/L: micrograms per litre
ppm: parts per million	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

Terms

APHA	American Public Health Association
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 a moisture has been determined on a solid sample the result is expressed on a dry 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 is representative of 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 like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (<i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
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 be used as a guide only 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

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

- Where a result is reported as a 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.
- 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 is not data from your samples.
- 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.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
- For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- 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 (PFTTrDA)	ug/L	< 0.01		0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01		0.01	Pass	
Method Blank						
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05		0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05		0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05		0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	< 0.05		0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05		0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05		0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05		0.05	Pass	
Method Blank						
Perfluoroalkyl sulfonic acids (PFASs)						
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 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01		0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05		0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01		0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01		0.01	Pass	
LCS - % Recovery						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	%	72		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	98		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	84		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	90		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	100		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	89		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	99		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	89		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	92		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	105		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	99		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)	%	96			50-150	Pass		
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	79			50-150	Pass		
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	88			50-150	Pass		
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	98			50-150	Pass		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	101			50-150	Pass		
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	77			50-150	Pass		
LCS - % Recovery								
Perfluoroalkyl sulfonic acids (PFSA's)								
Perfluorobutanesulfonic acid (PFBS)	%	92			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	61			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	111			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	77			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	86			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	71			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	105			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	56			50-150	Pass		
LCS - % Recovery								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	86			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	82			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	64			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	72			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)	M22-Ma20693	NCP	%	90		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma20693	NCP	%	66		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma20693	NCP	%	92		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma20693	NCP	%	98		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma20693	NCP	%	123		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma20693	NCP	%	100		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma20693	NCP	%	108		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma20693	NCP	%	126		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma20693	NCP	%	103		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ma20693	NCP	%	138		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma20693	NCP	%	110		50-150	Pass	
Spike - % Recovery								
Perfluoroalkyl sulfonamido substances								
				Result 1				
Perfluorooctane sulfonamide (FOSA)	M22-Ma20693	NCP	%	94		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma20693	NCP	%	122		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma20693	NCP	%	99		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma20693	NCP	%	96		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma20693	NCP	%	100		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma20693	NCP	%	49			50-150	Fail	Q08
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma20693	NCP	%	138			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSA)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M22-Ma20693	NCP	%	97			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ma20693	NCP	%	59			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma20693	NCP	%	113			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma20693	NCP	%	107			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma20693	NCP	%	114			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma20693	NCP	%	111			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ma20693	NCP	%	90			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ma20693	NCP	%	49			50-150	Fail	Q08
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma20693	NCP	%	102			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma20693	NCP	%	104			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma20693	NCP	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma20693	NCP	%	83			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)	M22-Ma25277	NCP	ug/L	0.20	0.20	2.0	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma25277	NCP	ug/L	0.35	0.37	5.0	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma25277	NCP	ug/L	0.67	0.66	2.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma25277	NCP	ug/L	0.59	0.61	3.0	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma25277	NCP	ug/L	0.23	0.24	7.0	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma25277	NCP	ug/L	0.17	0.15	9.0	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma25277	NCP	ug/L	0.04	0.05	22	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma25277	NCP	ug/L	0.09	0.13	32	30%	Fail	Q15
Perfluorododecanoic acid (PFDoDA)	M22-Ma25277	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ma25277	NCP	ug/L	0.01	0.01	10	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma25277	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ma25277	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma25277	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma25277	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma25277	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma25277	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma25277	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma21163	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma25277	NCP	ug/L	0.84	0.80	4.0	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma25277	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma25277	NCP	ug/L	0.35	0.32	9.0	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma25277	NCP	ug/L	0.60	0.73	19	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma21163	NCP	ug/L	0.10	0.10	2.0	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma25277	NCP	ug/L	0.04	0.05	12	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma25277	NCP	ug/L	1.1	1.1	3.0	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma25277	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma25277	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma25277	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma25277	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma25277	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass

Comments

Eurofins | Environment Testing accreditation number 1261, site 18217 is currently in progress of a controlled transition to a new custom built location at 179 Magowar Road, Girraween, NSW 2145. All results on this report denoted as being performed by Eurofins | Environment Testing Unit F3, Building F, 16 Mars road, Lane Cove West, NSW 2066, corporate site 18217, will have been performed on either Lane Cove or new Girraween site

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
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
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).
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
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:

Michael Cassidy	Analytical Services Manager
Joseph Edouard	Senior Analyst-PFAS (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EM2204587	Page	: 1 of 13
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: CRAIG TRIMBUR	Telephone	: +6138549 9600
Project	: JC0927	Date Samples Received	: 16-Mar-2022
Site	: 20220316074921-ALS-20	Issue Date	: 23-Mar-2022
Sampler	: ----	No. of samples received	: 18
Order number	: ----	No. of samples analysed	: 18

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP074I: Volatile Halogenated Compounds	EM2204587--002	SX_OB_20220315_08_05_SS	1,1-Dichloroethene	75-35-4	19.4 %	38.4-145%	Recovery less than lower data quality objective

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2204587--012	SX_OB_20220315_08_05_SS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	58.1 %	70.0-130%	Recovery less than lower data quality objective

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA001: pH in soil using 0.01M CaCl extract								
Soil Glass Jar - Unpreserved (EA001) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	22-Mar-2022	22-Mar-2022	✓	22-Mar-2022	22-Mar-2022	✓
Soil Glass Jar - Unpreserved (EA001) SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	22-Mar-2022	23-Mar-2022	✓	22-Mar-2022	22-Mar-2022	✓
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	----	----	----	21-Mar-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EA055) SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	----	----	----	21-Mar-2022	30-Mar-2022	✓



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	
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	21-Mar-2022	11-Sep-2022	✓	21-Mar-2022	11-Sep-2022	✓
Soil Glass Jar - Unpreserved (EG005T) SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	21-Mar-2022	12-Sep-2022	✓	21-Mar-2022	12-Sep-2022	✓
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	21-Mar-2022	12-Apr-2022	✓	21-Mar-2022	12-Apr-2022	✓
Soil Glass Jar - Unpreserved (EG035T) SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	21-Mar-2022	13-Apr-2022	✓	21-Mar-2022	13-Apr-2022	✓
EG048: Hexavalent Chromium (Alkaline Digest)								
Soil Glass Jar - Unpreserved (EG048G) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	22-Mar-2022	12-Apr-2022	✓	22-Mar-2022	29-Mar-2022	✓
Soil Glass Jar - Unpreserved (EG048G) SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	22-Mar-2022	13-Apr-2022	✓	22-Mar-2022	29-Mar-2022	✓
EK026SF: Total CN by Segmented Flow Analyser								
Soil Glass Jar - Unpreserved (EK026SF) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	22-Mar-2022	29-Mar-2022	✓	23-Mar-2022	05-Apr-2022	✓
Soil Glass Jar - Unpreserved (EK026SF) SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	22-Mar-2022	30-Mar-2022	✓	23-Mar-2022	05-Apr-2022	✓
EK040T: Fluoride Total								
Soil Glass Jar - Unpreserved (EK040T) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	22-Mar-2022	12-Apr-2022	✓	23-Mar-2022	12-Apr-2022	✓
Soil Glass Jar - Unpreserved (EK040T) SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	22-Mar-2022	13-Apr-2022	✓	23-Mar-2022	13-Apr-2022	✓
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P)								
SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	21-Mar-2022	11-Sep-2022	✓	----	----	----
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P)								
SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	21-Mar-2022	12-Sep-2022	✓	----	----	----



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	
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P)								
SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	21-Mar-2022	11-Sep-2022	✓	----	----	----
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P)								
SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	21-Mar-2022	12-Sep-2022	✓	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066-EM)								
SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	22-Mar-2022	29-Mar-2022	✓	22-Mar-2022	01-May-2022	✓
Soil Glass Jar - Unpreserved (EP066-EM)								
SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	22-Mar-2022	30-Mar-2022	✓	22-Mar-2022	01-May-2022	✓
EP074A: Monocyclic Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	18-Mar-2022	22-Mar-2022	✓	18-Mar-2022	22-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	18-Mar-2022	23-Mar-2022	✓	18-Mar-2022	23-Mar-2022	✓
EP074H: Naphthalene								
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	18-Mar-2022	22-Mar-2022	✓	18-Mar-2022	22-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	18-Mar-2022	23-Mar-2022	✓	18-Mar-2022	23-Mar-2022	✓
EP074I: Volatile Halogenated Compounds								
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	18-Mar-2022	22-Mar-2022	✓	18-Mar-2022	22-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	18-Mar-2022	23-Mar-2022	✓	18-Mar-2022	23-Mar-2022	✓
EP075A: Phenolic Compounds (Halogenated)								
Soil Glass Jar - Unpreserved (EP075-EM)								
SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	22-Mar-2022	29-Mar-2022	✓	22-Mar-2022	01-May-2022	✓
Soil Glass Jar - Unpreserved (EP075-EM)								
SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	22-Mar-2022	30-Mar-2022	✓	22-Mar-2022	01-May-2022	✓



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	
EP075A: Phenolic Compounds (Non-halogenated)								
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	22-Mar-2022	29-Mar-2022	✓	22-Mar-2022	01-May-2022	✓
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	22-Mar-2022	30-Mar-2022	✓	22-Mar-2022	01-May-2022	✓
EP075B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	22-Mar-2022	29-Mar-2022	✓	22-Mar-2022	01-May-2022	✓
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	22-Mar-2022	30-Mar-2022	✓	22-Mar-2022	01-May-2022	✓
EP075I: Organochlorine Pesticides								
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	22-Mar-2022	29-Mar-2022	✓	22-Mar-2022	01-May-2022	✓
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	22-Mar-2022	30-Mar-2022	✓	22-Mar-2022	01-May-2022	✓
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP074-UT) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	18-Mar-2022	22-Mar-2022	✓	18-Mar-2022	22-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	22-Mar-2022	29-Mar-2022	✓	22-Mar-2022	01-May-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT) SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	18-Mar-2022	23-Mar-2022	✓	18-Mar-2022	23-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM) SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	22-Mar-2022	30-Mar-2022	✓	22-Mar-2022	01-May-2022	✓



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	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	18-Mar-2022	22-Mar-2022	✓	18-Mar-2022	22-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM)								
SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	22-Mar-2022	29-Mar-2022	✓	22-Mar-2022	01-May-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	18-Mar-2022	23-Mar-2022	✓	18-Mar-2022	23-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM)								
SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	22-Mar-2022	30-Mar-2022	✓	22-Mar-2022	01-May-2022	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X)								
SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	18-Mar-2022	11-Sep-2022	✓	18-Mar-2022	27-Apr-2022	✓
HDPE Soil Jar (EP231X)								
SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	18-Mar-2022	12-Sep-2022	✓	18-Mar-2022	27-Apr-2022	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X)								
SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	18-Mar-2022	11-Sep-2022	✓	18-Mar-2022	27-Apr-2022	✓
HDPE Soil Jar (EP231X)								
SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	18-Mar-2022	12-Sep-2022	✓	18-Mar-2022	27-Apr-2022	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE Soil Jar (EP231X)								
SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	18-Mar-2022	11-Sep-2022	✓	18-Mar-2022	27-Apr-2022	✓
HDPE Soil Jar (EP231X)								
SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	18-Mar-2022	12-Sep-2022	✓	18-Mar-2022	27-Apr-2022	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X)								
SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	18-Mar-2022	11-Sep-2022	✓	18-Mar-2022	27-Apr-2022	✓
HDPE Soil Jar (EP231X)								
SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	18-Mar-2022	12-Sep-2022	✓	18-Mar-2022	27-Apr-2022	✓



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) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS	15-Mar-2022	18-Mar-2022	11-Sep-2022	✓	18-Mar-2022	27-Apr-2022	✓
HDPE Soil Jar (EP231X) SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220316_04_11_SS_Primary_ALS	16-Mar-2022	18-Mar-2022	12-Sep-2022	✓	18-Mar-2022	27-Apr-2022	✓

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) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS, SX_OB_20220316_00_04_SS_Primary_ALS, SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS, SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS, SX_OB_20220316_04_11_SS_Primary_ALS, SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS, SX_OB_20220316_04_11_SS_Primary_ALS	21-Mar-2022	23-Mar-2022	17-Sep-2022	✓	23-Mar-2022	17-Sep-2022	✓
Miscellaneous Plastic bottle - Unpreserved (EP231X-INJ) SX_OB_20220315_08_30_SR_Primary_ALS,	SX_OB_20220315_08_32_SB_Primary_ALS	15-Mar-2022	22-Mar-2022	11-Sep-2022	✓	22-Mar-2022	11-Sep-2022	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS, SX_OB_20220316_00_04_SS_Primary_ALS, SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS, SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS, SX_OB_20220316_04_11_SS_Primary_ALS, SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS, SX_OB_20220316_04_11_SS_Primary_ALS	21-Mar-2022	23-Mar-2022	17-Sep-2022	✓	23-Mar-2022	17-Sep-2022	✓
Miscellaneous Plastic bottle - Unpreserved (EP231X-INJ) SX_OB_20220315_08_30_SR_Primary_ALS,	SX_OB_20220315_08_32_SB_Primary_ALS	15-Mar-2022	22-Mar-2022	11-Sep-2022	✓	22-Mar-2022	11-Sep-2022	✓



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) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS, SX_OB_20220316_00_04_SS_Primary_ALS, SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS, SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS, SX_OB_20220316_04_11_SS_Primary_ALS, SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS, SX_OB_20220316_04_11_SS_Primary_ALS	21-Mar-2022	23-Mar-2022	17-Sep-2022	✓	23-Mar-2022	17-Sep-2022	✓
Miscellaneous Plastic bottle - Unpreserved (EP231X-INJ) SX_OB_20220315_08_30_SR_Primary_ALS,	SX_OB_20220315_08_32_SB_Primary_ALS	15-Mar-2022	22-Mar-2022	11-Sep-2022	✓	22-Mar-2022	11-Sep-2022	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS, SX_OB_20220316_00_04_SS_Primary_ALS, SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS, SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS, SX_OB_20220316_04_11_SS_Primary_ALS, SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS, SX_OB_20220316_04_11_SS_Primary_ALS	21-Mar-2022	23-Mar-2022	17-Sep-2022	✓	23-Mar-2022	17-Sep-2022	✓
Miscellaneous Plastic bottle - Unpreserved (EP231X-INJ) SX_OB_20220315_08_30_SR_Primary_ALS,	SX_OB_20220315_08_32_SB_Primary_ALS	15-Mar-2022	22-Mar-2022	11-Sep-2022	✓	22-Mar-2022	11-Sep-2022	✓
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X) SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS, SX_OB_20220316_00_04_SS_Primary_ALS, SX_OB_20220315_08_04_SS_Primary_ALS, SX_OB_20220315_11_50_SS_Primary_ALS, SX_OB_20220315_16_10_SS_Primary_ALS, SX_OB_20220316_00_04_SS_Primary_ALS,	SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS, SX_OB_20220316_04_11_SS_Primary_ALS, SX_OB_20220315_08_05_SS_Duplicate_ALS, SX_OB_20220315_15_58_SS_Triplicate_ALS, SX_OB_20220315_20_53_SS_Primary_ALS, SX_OB_20220316_04_11_SS_Primary_ALS	21-Mar-2022	23-Mar-2022	17-Sep-2022	✓	23-Mar-2022	17-Sep-2022	✓
Miscellaneous Plastic bottle - Unpreserved (EP231X-INJ) SX_OB_20220315_08_30_SR_Primary_ALS,	SX_OB_20220315_08_32_SB_Primary_ALS	15-Mar-2022	22-Mar-2022	11-Sep-2022	✓	22-Mar-2022	11-Sep-2022	✓



Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Reaular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	4	35	11.43	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	4	35	11.43	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Deionised Water Leach - Plastic Leaching Vessel	EN60-DIa-P	2	27	7.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	35	5.71	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Matrix: **SOIL** Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Matrix Spikes (MS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	4	35	11.43	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER** Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	4	25.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	16	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	16	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	16	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
pH in soil using a 0.01M CaCl ₂ extract	EA001	SOIL	In house: Referenced to Rayment and Lyons 4B3 (mod.) or 4B4 (mod.) 10 g of soil is mixed with 50 mL of 0.01M CaCl ₂ and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM Schedule B(3).
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).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl ₂) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	SOIL	In house: Referenced to USEPA SW846, Method 3060. Hexavalent chromium is extracted by alkaline digestion. The digest is determined by photometrically by automatic discrete analyser, following pH adjustment. The instrument uses colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM Schedule B(3)
Total Cyanide by Segmented Flow Analyser	EK026SF	SOIL	In house: Referenced to APHA 4500-CN C / ASTM D7511 / ISO 14403. Caustic leachates of soil samples are introduced into an automated segmented flow analyser. Complex bound cyanide is decomposed in a continuously flowing stream, at a pH of 3.8, by the effect of UV light. A UV-B lamp (312 nm) and a decomposition spiral of borosilicate glass are used to filter out UV light with a wavelength of less than 290 nm thus preventing the conversion of thiocyanate into cyanide. The hydrogen cyanide present at a pH of 3.8 is separated by gas dialysis. The hydrogen cyanide is then determined photometrically, based on the reaction of cyanide with chloramine-T to form cyanogen chloride. This then reacts with 4-pyridine carboxylic acid and 1,3-dimethylbarbituric acid to give a red colour which is measured at 600 nm. This method is compliant with NEPM Schedule B(3).
Total Fluoride	EK040T	SOIL	(In-house) Total fluoride is determined by ion specific electrode (ISE) in a solution obtained after a Sodium Carbonate / Potassium Carbonate fusion dissolution.
PCB - VIC EPA 448.3 Screen	EP066-EM	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071-EM	SOIL	In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40.
Volatile Organic Compounds - Ultra-trace	EP074-UT	SOIL	In house: Referenced to USEPA SW 846 - 8260 Extracts are analysed by Purge and Trap, Capillary GC/MS in partial SIM/Scan mode. Quantification is by comparison against an established multi-point calibration curves. This method is compliant with NEPM Schedule B(3).



Analytical Methods	Method	Matrix	Method Descriptions
Volatile Organic Compounds - Ultra-trace - Summations	EP074-UT-SUM	SOIL	Summation of MAHs and VHCs
Semivolatile Organic Compounds - Waste Classification	EP075-EM	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
SVOC - Waste Classification (Sums)	EP075-EM-SUM	SOIL	Summations for EP075 (EM variation)
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	WATER	In house: Direct injection analysis of fresh waters after dilution (1:1) with mobile phase solvent. Analysis by LC-Electrospray-MS-MS, Negative Mode using MRM. Where commercially available, isotopically labelled analogues of the target analytes are used as internal standards for quantification. Where a labelled analogue is not commercially available, the internal standard with similar chemistry and the closest retention time to the target is used for quantification. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers.

Preparation Methods	Method	Matrix	Method Descriptions
NaOH leach for CN in Soils	CN-PR	SOIL	In house: APHA 4500 CN. Samples are extracted by end-over-end tumbling with NaOH.
pH in soil using a 0.01M CaCl ₂ extract	EA001-PR	SOIL	In house: Referenced to Rayment and Lyons 4B1, 10 g of soil is mixed with 50 mL of 0.01M CaCl ₂ and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM Schedule B(3).
Alkaline digestion for Hexavalent Chromium	EG048PR	SOIL	In house: Referenced to USEPA SW846, Method 3060A.
Total Fluoride	EK040T-PR	SOIL	In house: Samples are fused with Sodium Carbonate / Potassium Carbonate flux.
ASLP for Non & Semivolatile Analytes - Plastic Leaching Vessel	EN60a-P	SOIL	In house QWI-EN/60 referenced to AS4439.3 Preparation of Leachates.
Deionised Water Leach - Plastic Leaching Vessel	EN60-DIa-P	SOIL	In house QWI-EN/60 referenced to AS4439.3 Preparation of Leachates
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils - Ultra-trace.	ORG16-UT	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids - VIC EPA Screen	ORG17-EM	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na ₂ SO ₄ and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.



<i>Preparation Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	SOIL	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.
Preparation for PFAS in water.	EP231-PR	WATER	Method presumes direct injection without workup. Preparation includes addition of internal standard and surrogate, and filtration prior to analysis.

QUALITY CONTROL REPORT

Work Order	: EM2204587	Page	: 1 of 28
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: CRAIG TRIMBUR	Contact	: Bronwyn Sheen
Address	: D1.1 63-85 TURNER STREET PORT MELBOURNE 3207	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9600
Project	: JC0927	Date Samples Received	: 16-Mar-2022
Order number	: ----	Date Analysis Commenced	: 18-Mar-2022
C-O-C number	: 20220316074921-ALS-20	Issue Date	: 23-Mar-2022
Sampler	: ----		
Site	: 20220316074921-ALS-20		
Quote number	: EN/150/19 -WGTP -Bulk Sample Quote		
No. of samples received	: 18		
No. of samples analysed	: 18		



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
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC



General Comments

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

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4238354)									
EM2204380-010	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	15	16	6.9	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	10	12	21.1	No Limit
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	7	7	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	13	12	0.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.0	No Limit
EG005T: Zinc	7440-66-6	5	mg/kg	9	10	0.0	No Limit		
EM2204451-009	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	26	28	6.9	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	31	35	12.5	0% - 50%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	25	33	26.6	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	9	11	18.7	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.0	No Limit
EG005T: Zinc	7440-66-6	5	mg/kg	18	20	14.0	No Limit		
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4241421)									



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 (%)	
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4241421) - continued										
EM2204587-001	SX_OB_20220315_08_04_ SS_Primary_ALS	EA001: pH (CaCl2)	----	0.1	pH Unit	7.5	7.6	0.0	0% - 20%	
EM2204611-002	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.9	7.9	0.0	0% - 20%	
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4238628)										
EM2204337-138	Anonymous	EA055: Moisture Content	----	0.1	%	34.2	32.9	3.9	0% - 20%	
EM2204600-001	Anonymous	EA055: Moisture Content	----	0.1	%	38.3	42.6	10.8	0% - 20%	
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4238353)										
EM2204380-010	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
EM2204451-009	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 4239630)										
EM2203997-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
EM2204451-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 4239631)										
EM2204587-009	SX_OB_20220316_00_04_ SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
EM2204647-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4241593)										
EM2204587-001	SX_OB_20220315_08_04_ SS_Primary_ALS	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<5	<5	0.0	No Limit	
EM2204611-002	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit	
EK040T: Fluoride Total (QC Lot: 4239633)										
EM2203997-001	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	450	460	2.6	0% - 50%	
EM2204451-008	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	190	210	9.8	No Limit	
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4237496)										
EM2203997-001	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
EM2204587-007	SX_OB_20220315_16_10_ SS_Primary_ALS	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4232312)										
EM2204587-001	SX_OB_20220315_08_04_ SS_Primary_ALS	EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit	
		EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074-UT: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
			106-42-3							
		EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit			
EP074H: Naphthalene (QC Lot: 4232312)										
EM2204587-001	SX_OB_20220315_08_04_ SS_Primary_ALS	EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	<1	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 (%)
EP074I: Volatile Halogenated Compounds (QC Lot: 4232312)									
EM2204587-001	SX_OB_20220315_08_04_ SS_Primary_ALS	EP074-UT: 1.1-Dichloroethene	75-35-4	0.01	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: cis-1.2-Dichloroethene	156-59-2	0.01	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: 1.1.1-Trichloroethane	71-55-6	0.01	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: 1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: 1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: trans-1.2-Dichloroethene	156-60-5	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: 1.2-Dichloroethane	107-06-2	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: 1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: 1.4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: 1.2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
EP074-UT: 1.1.2-Trichloroethane	79-00-5	0.04	mg/kg	<0.50	<0.50	0.0	No Limit		
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075A: Phenolic Compounds (Halogenated) (QC Lot: 4237495)									
EM2203997-001	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-9 0-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EM2204587-007	SX_OB_20220315_16_10_ SS_Primary_ALS	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	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 (%)
EP075A: Phenolic Compounds (Halogenated) (QC Lot: 4237495) - continued									
EM2204587-007	SX_OB_20220315_16_10_ SS_Primary_ALS	EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-9 0-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit
EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4237495)									
EM2203997-001	Anonymous	EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	<5	0.0	No Limit
EM2204587-007	SX_OB_20220315_16_10_ SS_Primary_ALS	EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.0	No Limit
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4237495)	Anonymous	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	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 (%)
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4237495) - continued									
EM2203997-001	Anonymous	EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	<1.0	0.0	No Limit
EM2204587-007	SX_OB_20220315_16_10_ SS_Primary_ALS	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	<1.0	0.0	No Limit		
EP075I: Organochlorine Pesticides (QC Lot: 4237495)									
EM2203997-001	Anonymous	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	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 (%)
EP075I: Organochlorine Pesticides (QC Lot: 4237495) - continued									
EM2204587-007	SX_OB_20220315_16_10_ SS_Primary_ALS	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EP075-EM: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP075-EM: 4,4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4232312)									
EM2204587-001	SX_OB_20220315_08_04_ SS_Primary_ALS	EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<20	<20	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4237497)									
EM2203997-001	Anonymous	EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EM2204587-007	SX_OB_20220315_16_10_ SS_Primary_ALS	EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4232312)									
EM2204587-001	SX_OB_20220315_08_04_ SS_Primary_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<20	<20	0.0	No Limit
		EP074-UT: C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4237497)									
EM2203997-001	Anonymous	EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	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 (%)
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4237497) - continued									
EM2203997-001	Anonymous	EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EM2204587-007	SX_OB_20220315_16_10_SS_Primary_ALS	EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4235235)									
EM2203997-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2204587-007	SX_OB_20220315_16_10_SS_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4235235)									
EM2203997-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EM2204587-007	SX_OB_20220315_16_10_SS_Primary_ALS	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	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: 4235235) - continued									
EM2204587-007	SX_OB_20220315_16_10_ SS_Primary_ALS	EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<5 µg/kg	<0.005	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4235235)									
EM2203997-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EM2204587-007	SX_OB_20220315_16_10_ SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<5.0 µg/kg	<0.0050
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9			0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6			0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8			0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2			0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7			0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2			0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4235235)									
EM2203997-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4235235) - continued									
EM2203997-001	Anonymous	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
EM2204587-007	SX_OB_20220315_16_10_SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4235235)									
EM2203997-001	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
EM2204587-007	SX_OB_20220315_16_10_SS_Primary_ALS	EP231X: Sum of PFAS	----	0.0002	mg/kg	<50.0 µg/kg	<0.0500	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4242599)									
EM2204587-003	SX_OB_20220315_08_30_SR_Primary_ALS	EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: 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: 4243448)									
EM2204587-001	SX_OB_20220315_08_04_SS_Primary_ALS	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



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: 4243448) - continued									
EM2204587-001	SX_OB_20220315_08_04_ SS_Primary_ALS	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
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4243449)									
EM2204587-011	SX_OB_20220315_08_04_ SS_Primary_ALS	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: 4242599)									
EM2204587-003	SX_OB_20220315_08_30_ SR_Primary_ALS	EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	<0.10	0.0	No Limit		
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4243448)									
EM2204587-001	SX_OB_20220315_08_04_ SS_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4243449)									
EM2204587-011	SX_OB_20220315_08_04_ SS_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit		
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4242599)									
EM2204587-003	SX_OB_20220315_08_30_ SR_Primary_ALS	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4243448)									
EM2204587-001	SX_OB_20220315_08_04_ SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4243448) - continued									
EM2204587-001	SX_OB_20220315_08_04_ SS_Primary_ALS	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: 4243449)									
EM2204587-011	SX_OB_20220315_08_04_ SS_Primary_ALS	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: 4242599)									
EM2204587-003	SX_OB_20220315_08_30_ SR_Primary_ALS	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4243448)									
EM2204587-001	SX_OB_20220315_08_04_ SS_Primary_ALS	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: 4243449)									
EM2204587-011	SX_OB_20220315_08_04_ SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit

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 Work Order : EM2204587
 Client : AGON ENVIRONMENTAL PTY LTD
 Project : JC0927



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: 4243449) - continued									
EM2204587-011	SX_OB_20220315_08_04_ SS_Primary_ALS	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: 4242599)									
EM2204587-003	SX_OB_20220315_08_30_ SR_Primary_ALS	EP231X-INJ: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4243448)									
EM2204587-001	SX_OB_20220315_08_04_ SS_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4243449)									
EM2204587-011	SX_OB_20220315_08_04_ SS_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit



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

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

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4238354)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	97.4	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	64.1	50.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	106	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	95.6	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	100	70.0	130
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	73.0	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	98.9	70.0	130
EG005T: Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----
EG005T: Silver	7440-22-4	2	mg/kg	<2	2.9 mg/kg	79.8	70.0	130
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	94.4	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	76.1	70.0	130
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4239991)								
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.0	----	----	----	----
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4239992)								
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.0	----	----	----	----
EA001: pH in soil using 0.01M CaCl extract (QCLot: 4241421)								
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	101	98.8	101
					7 pH Unit	100	99.3	101
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4238353)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	82.0	70.0	130
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4239630)								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	86.3	70.0	130
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4239631)								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	75.5	70.0	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4241593)								
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	74.8	70.0	130
EK040T: Fluoride Total (QCLot: 4239633)								
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	75.8	75.2	110
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4237496)								
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	124	67.4	136
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4232312)								
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	94.8	69.2	116
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	92.2	67.7	116



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4232312) - continued									
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	92.3	66.6	115	
EP074-UT: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4.2 mg/kg	90.4	65.2	112	
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	92.1	69.4	111	
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	91.6	68.4	110	
EP074H: Naphthalene (QCLot: 4232312)									
EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	0.6 mg/kg	107	72.3	114	
EP074I: Volatile Halogenated Compounds (QCLot: 4232312)									
EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	66.6	47.0	138	
EP074-UT: 1.1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	87.9	57.6	125	
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	91.9	72.3	115	
EP074-UT: trans-1.2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	92.6	60.5	122	
EP074-UT: cis-1.2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	94.2	70.3	112	
EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	93.6	66.6	115	
EP074-UT: 1.1.1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	94.0	64.4	122	
EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	90.5	58.4	127	
EP074-UT: 1.2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	103	72.9	114	
EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	93.0	64.7	115	
EP074-UT: 1.1.2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	97.6	72.6	116	
EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	93.2	60.0	119	
EP074-UT: 1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	92.8	71.8	116	
EP074-UT: 1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	106	66.1	116	
EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	101	39.8	128	
EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	94.9	70.3	113	
EP074-UT: 1.4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	95.2	62.6	113	
EP074-UT: 1.2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	94.6	70.8	110	
EP074-UT: 1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	105	48.4	120	
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4237495)									
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	88.4	74.5	126	
EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	88.4	72.7	126	
EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	88.7	73.5	132	
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	90.7	72.8	128	
EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	2 mg/kg	88.5	73.3	134	
EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	2 mg/kg	87.1	72.4	128	
EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	80.7	69.4	126	
EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/5 8-90-2	0.05	mg/kg	<0.05	4 mg/kg	80.8	71.9	128	
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	78.8	54.4	135	



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4237495)									
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	89.6	71.5	130	
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	87.1	73.4	129	
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	88.8	74.3	129	
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	87.7	70.9	133	
EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	89.6	71.8	132	
EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	81.8	41.0	156	
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	93.0	65.3	134	
EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	86.1	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	87.0	62.0	128	
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	82.8	34.5	137	
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4237495)									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	90.0	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	90.4	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	89.7	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	90.2	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	91.2	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	89.9	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	89.3	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	90.9	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	91.5	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	92.8	75.0	133	
EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	4 mg/kg	93.3	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	89.4	65.1	130	
EP075-EM: Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	92.9	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	92.4	72.9	135	
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	93.1	71.3	134	
EP075I: Organochlorine Pesticides (QCLot: 4237495)									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	90.0	71.0	129	
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	89.9	74.8	126	
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	91.4	75.7	130	
EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	2 mg/kg	90.3	70.8	130	
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	89.5	76.5	134	
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	88.7	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	88.0	76.8	130	
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	87.2	73.6	130	
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	87.2	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	87.2	75.3	131	
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	89.5	69.4	134	



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike	Spike Recovery (%)	Acceptable Limits (%)	
					Concentration	LCS	Low	High
EP075I: Organochlorine Pesticides (QCLot: 4237495) - continued								
EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	90.8	71.0	132
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	89.9	78.0	133
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	89.6	69.0	143
EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	2 mg/kg	97.8	55.7	145
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	90.0	71.4	135
EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	90.0	74.8	134
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	90.7	70.2	135
EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	89.5	77.7	133
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	90.2	63.6	135
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4232312)								
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	101	61.1	119
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4237497)								
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	760 mg/kg	104	74.4	129
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	3270 mg/kg	102	81.0	123
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1550 mg/kg	99.7	81.8	121
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	101	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4232312)								
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	102	59.9	119
EP074-UT: C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4237497)								
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1110 mg/kg	102	75.4	132
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	4180 mg/kg	102	80.8	120
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	290 mg/kg	103	73.3	136
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	102	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4235235)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	85.7	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	77.9	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	87.2	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	73.0	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	75.2	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	73.5	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4235235)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	77.6	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.6	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.8	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	77.7	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.0	69.0	133



Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report				
					Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4235235) - continued									
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	78.1	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	130	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.9	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	69.6	69.0	133	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4235235)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	73.2	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	127	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	97.0	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	98.2	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	120	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	80.4	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.6	61.0	139	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4235235)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	99.8	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	97.7	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	123	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	85.4	70.0	130	
EP231P: PFAS Sums (QCLot: 4235235)									
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 (%)		Acceptable Limits (%)	
						LCS	Low	High	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4242599)									
EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.444 µg/L	95.5	72.0	130	
EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.47 µg/L	91.9	71.0	127	
EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.457 µg/L	88.9	68.0	131	
EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.477 µg/L	96.1	69.0	134	
EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.465 µg/L	89.9	65.0	140	
EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.482 µg/L	90.5	53.0	142	



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike	Spike Recovery (%)	Acceptable Limits (%)	
					Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4243448)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	94.7	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	93.5	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	92.7	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	104	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	97.8	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	87.4	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4243449)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	96.2	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	95.6	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	91.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	95.7	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	100	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	95.3	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4242599)								
EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	2.5 µg/L	88.2	73.0	129
EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.5 µg/L	91.2	72.0	129
EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.5 µg/L	90.5	72.0	129
EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.5 µg/L	91.8	72.0	130
EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.5 µg/L	90.9	71.0	133
EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.5 µg/L	98.5	69.0	130
EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.5 µg/L	87.4	71.0	129
EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.5 µg/L	102	69.0	133
EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.5 µg/L	95.9	72.0	134
EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.5 µg/L	99.3	65.0	144
EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	1.25 µg/L	98.1	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4243448)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	93.2	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	92.9	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	104	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	97.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	98.4	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	96.2	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	94.9	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	100	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	97.7	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	102	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4243449)								



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
					LCS	Low	High	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4243449) - continued								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	103	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	101	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	97.5	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	102	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	100	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	98.2	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	99.9	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	106	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	100	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	110	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4242599)								
EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.5 µg/L	90.1	67.0	137
EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	1.25 µg/L	96.6	68.0	141
EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	1.25 µg/L	101	70.0	130
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	1.25 µg/L	94.2	70.0	130
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	1.25 µg/L	99.5	70.0	130
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.5 µg/L	98.0	65.0	136
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.5 µg/L	85.1	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4243448)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	97.6	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	112	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	106	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	110	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	98.1	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	112	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	82.8	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4243449)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	101	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 (%)	Acceptable Limits (%)	
						LCS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4243449) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	106	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	96.2	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	107	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	109	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	90.6	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4242599)								
EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.469 µg/L	94.6	63.0	143
EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.476 µg/L	104	64.0	140
EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.48 µg/L	96.1	67.0	138
EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.483 µg/L	90.3	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4243448)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	101	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	98.0	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	106	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	75.9	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4243449)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	103	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	114	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	105	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	102	70.0	130
EP231P: PFAS Sums (QCLot: 4242599)								
EP231X-INJ: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X-INJ: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X-INJ: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----
EP231P: PFAS Sums (QCLot: 4243448)								
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: 4243449)								
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	----	----	----	----



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
						LCS	Low	High
EP231P: PFAS Sums (QCLot: 4243449) - continued								
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	Spike Recovery(%) MS	Acceptable Limits (%) Low High	
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4238354)							
EM2204380-011	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	102	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	103	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	98.2	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	106	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	105	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	100	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	99.0	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4238353)							
EM2204380-011	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	97.5	76.0	116
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4239630)							
EM2203997-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	82.3	58.0	114
EM2203997-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	79.4	58.0	114
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4239631)							
EM2204587-010	SX_OB_20220316_04_11_SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	82.3	58.0	114
EM2204587-010	SX_OB_20220316_04_11_SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	98.3	58.0	114
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4241593)							
EM2204587-002	SX_OB_20220315_08_05_SS_Duplicate_ALS	EK026SF: Total Cyanide	57-12-5	20 mg/kg	76.2	70.0	130
EK040T: Fluoride Total (QCLot: 4239633)							
EM2203997-002	Anonymous	EK040T: Fluoride	16984-48-8	400 mg/kg	70.5	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4237496)							
EM2204324-001	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	121	59.6	152
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4232312)							
EM2204587-002	SX_OB_20220315_08_05_SS_Duplicate_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	76.8	53.7	130
		EP074-UT: Toluene	108-88-3	2 mg/kg	87.6	55.1	124
EP074I: Volatile Halogenated Compounds (QCLot: 4232312)							
EM2204587-002	SX_OB_20220315_08_05_SS_Duplicate_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	# 19.4	38.4	145



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike Concentration	SpikeRecovery(%) MS	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP074I: Volatile Halogenated Compounds (QCLot: 4232312) - continued							
EM2204587-002	SX_OB_20220315_08_05_SS_Duplicate_ALS	EP074-UT: Trichloroethene	79-01-6	2 mg/kg	76.4	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	84.8	55.5	122
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4237495)							
EM2203997-002	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	81.9	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	84.5	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	49.5	10.0	144
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4237495)							
EM2203997-002	Anonymous	EP075-EM: Phenol	108-95-2	3 mg/kg	84.4	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	66.8	34.2	129
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4237495)							
EM2203997-002	Anonymous	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	76.9	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	76.7	37.8	152
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4232312)							
EM2204587-002	SX_OB_20220315_08_05_SS_Duplicate_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	87.0	42.3	111
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4237497)							
EM2204324-002	Anonymous	EP071-EM: C10 - C14 Fraction	----	760 mg/kg	104	71.3	126
		EP071-EM: C15 - C28 Fraction	----	3270 mg/kg	102	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1550 mg/kg	99.8	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	5580 mg/kg	102	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4232312)							
EM2204587-002	SX_OB_20220315_08_05_SS_Duplicate_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	88.5	39.9	109
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4237497)							
EM2204324-002	Anonymous	EP071-EM: >C10 - C16 Fraction	----	1110 mg/kg	102	71.5	130
		EP071-EM: >C16 - C34 Fraction	----	4180 mg/kg	102	76.9	119
		EP071-EM: >C34 - C40 Fraction	----	290 mg/kg	103	65.3	139
		EP071-EM: >C10 - C40 Fraction (sum)	----	5580 mg/kg	102	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4235235)							
EM2203997-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	90.4	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	73.3	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	104	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	70.6	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	74.1	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	76.5	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4235235)							
EM2203997-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	86.8	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	85.6	69.0	132



Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4235235) - continued							
EM2203997-002	Anonymous	EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	98.8	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	76.8	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	94.4	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	75.3	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	130	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	95.8	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	111	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	109	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	69.6	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4235235)							
EM2203997-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	78.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	129	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	105	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	124	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	113	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	91.2	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	92.3	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4235235)							
EM2203997-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	97.2	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	88.8	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	97.1	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	81.0	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4242599)							
EM2204587-004	SX_OB_20220315_08_32_SB_Primary_ALS	EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.444 µg/L	99.0	72.0	130
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.47 µg/L	96.4	71.0	127
		EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.457 µg/L	93.4	68.0	131
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.477 µg/L	95.0	69.0	134
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.465 µg/L	94.2	65.0	140
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.482 µg/L	95.2	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4243448)							



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: 4243448) - continued									
EM2204587-002	SX_OB_20220315_08_05_SS_Duplicate_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	101	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	99.6	68.0	131		
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	109	69.0	134		
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	96.4	65.0	140		
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	99.6	53.0	142		
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4243449)									
EM2204587-012	SX_OB_20220315_08_05_SS_Duplicate_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	100	72.0	130		
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	92.9	71.0	127		
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	97.2	68.0	131		
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	98.4	69.0	134		
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	98.8	65.0	140		
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	85.0	53.0	142		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4242599)									
EM2204587-004	SX_OB_20220315_08_32_SB_Primary_ALS	EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	2.5 µg/L	95.6	73.0	129		
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.5 µg/L	95.4	72.0	129		
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.5 µg/L	100	72.0	129		
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.5 µg/L	95.5	72.0	130		
		EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.5 µg/L	98.5	71.0	133		
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.5 µg/L	95.3	69.0	130		
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.5 µg/L	91.5	71.0	129		
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.5 µg/L	98.9	69.0	133		
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.5 µg/L	103	72.0	134		
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.5 µg/L	102	65.0	144		
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	1.25 µg/L	109	71.0	132		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4243448)									
EM2204587-002	SX_OB_20220315_08_05_SS_Duplicate_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	94.2	73.0	129		
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	102	72.0	129		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	96.3	72.0	129		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	104	72.0	130		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	100.0	71.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	102	69.0	130		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	98.0	71.0	129		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	107	69.0	133		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	101	72.0	134		
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	97.1	65.0	144		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	104	71.0	132		
		EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4243449)							



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: 4243449) - continued							
EM2204587-012	SX_OB_20220315_08_05_SS_Duplicate_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	98.9	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	99.6	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	96.9	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	100	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	96.3	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	96.6	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	93.0	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	91.6	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	103	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	70.3	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	106	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4242599)							
EM2204587-004	SX_OB_20220315_08_32_SB_Primary_ALS	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.5 µg/L	102	67.0	137
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	1.25 µg/L	104	68.0	141
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	1.25 µg/L	104	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	1.25 µg/L	99.3	70.0	130
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	1.25 µg/L	101	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.5 µg/L	95.0	65.0	136
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.5 µg/L	86.8	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4243448)							
EM2204587-002	SX_OB_20220315_08_05_SS_Duplicate_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	97.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	126	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	102	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	111	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	108	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	115	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	98.0	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4243449)							



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4243449) - continued							
EM2204587-012	SX_OB_20220315_08_05_SS_Duplicate_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	95.7	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	102	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	105	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	97.3	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	95.8	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	96.2	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4242599)							
EM2204587-004	SX_OB_20220315_08_32_SB_Primary_ALS	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.469 µg/L	107	63.0	143
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.476 µg/L	101	64.0	140
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.48 µg/L	103	67.0	138
		EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.483 µg/L	88.5	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4243448)							
EM2204587-002	SX_OB_20220315_08_05_SS_Duplicate_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	96.9	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	115	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	79.6	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4243449)							
EM2204587-012	SX_OB_20220315_08_05_SS_Duplicate_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	102	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	101	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	98.4	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	# 58.1	70.0	130

CERTIFICATE OF ANALYSIS

Work Order : **EM2204587**
Client : **AGON ENVIRONMENTAL PTY LTD**
Contact : CRAIG TRIMBUR
Address : D1.1 63-85 TURNER STREET
 PORT MELBOURNE 3207

Telephone : ----
Project : JC0927
Order number : ----
C-O-C number : 20220316074921-ALS-20
Sampler : ----
Site : 20220316074921-ALS-20
Quote number : EN/150/19 -WGTP -Bulk Sample Quote
No. of samples received : 18
No. of samples analysed : 18

Page : 1 of 29
Laboratory : Environmental Division Melbourne
Contact : Bronwyn Sheen
Address : 4 Westall Rd Springvale VIC Australia 3171

Telephone : +6138549 9600
Date Samples Received : 16-Mar-2022 16:15
Date Analysis Commenced : 18-Mar-2022
Issue Date : 23-Mar-2022 19:45



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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC



General Comments

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

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

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

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

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

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

- EP074-UT: Particular samples EM2204587_002 shows poor matrix spike recovery due to sample heterogeneity.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP074-UT: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074-WF: Where reported, Sum of trichlorobenzenes is the sum of the reported concentrations of 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene, and 1,3,5-Trichlorobenzene at or above the LOR.
- EP231X: Poor matrix spike recovery for sample EM2204587-012 due to sample matrix interference.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.
- EN60: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.
- EN60-DI: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.
- EP231X-INJ: The direct injection LCMSMS method may be used where the sample matrix is not suitable for Solid Phase Extraction (e.g. significant particulate load) or where only a single sample container is received.



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS	SX_OB_20220315_11_50_SS_Primary_ALS	SX_OB_20220315_15_58_SS_Triplicate_ALS	SX_OB_20220315_16_10_SS_Primary_ALS
Sampling date / time				15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10
Compound	CAS Number	LOR	Unit	EM2204587-001	EM2204587-002	EM2204587-005	EM2204587-006	EM2204587-007
				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	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
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: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS	SX_OB_20220315_11_50_SS_Primary_ALS	SX_OB_20220315_15_58_SS_Triplicate_ALS	SX_OB_20220315_16_10_SS_Primary_ALS
Sampling date / time				15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10
Compound	CAS Number	LOR	Unit	EM2204587-001	EM2204587-002	EM2204587-005	EM2204587-006	EM2204587-007
				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	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
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	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
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)	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	101	108	93.9	91.9	94.5
13C8-PFOA	----	0.02	%	106	103	105	105	103



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220315_20_53_SS_Primary_ALS	SX_OB_20220316_00_04_SS_Primary_ALS	SX_OB_20220316_04_11_SS_Primary_ALS	----	----
Sampling date / time				15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	----	----
Compound	CAS Number	LOR	Unit	EM2204587-008	EM2204587-009	EM2204587-010	-----	-----
				Result	Result	Result	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotridecanoic acid (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	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220315_20_53_SS_Primary_ALS	SX_OB_20220316_00_04_SS_Primary_ALS	SX_OB_20220316_04_11_SS_Primary_ALS	----	----
Sampling date / time				15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	----	----
Compound	CAS Number	LOR	Unit	EM2204587-008	EM2204587-009	EM2204587-010	-----	-----
				Result	Result	Result	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	----	----
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	----	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	111	94.3	106	----	----
13C8-PFOA	----	0.02	%	105	101	99.5	----	----



Analytical Results

Sub-Matrix: DI WATER LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS	SX_OB_20220315_11_50_SS_Primary_ALS	SX_OB_20220315_15_58_SS_Triplicate_ALS	SX_OB_20220315_16_10_SS_Primary_ALS
Sampling date / time				15-Mar-2022 00:00	15-Mar-2022 00:00	15-Mar-2022 00:00	15-Mar-2022 00:00	15-Mar-2022 00:00
Compound	CAS Number	LOR	Unit	EM2204587-011	EM2204587-012	EM2204587-013	EM2204587-014	EM2204587-015
				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: DI WATER LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS	SX_OB_20220315_11_50_SS_Primary_ALS	SX_OB_20220315_15_58_SS_Triplicate_ALS	SX_OB_20220315_16_10_SS_Primary_ALS
Sampling date / time				15-Mar-2022 00:00	15-Mar-2022 00:00	15-Mar-2022 00:00	15-Mar-2022 00:00	15-Mar-2022 00:00
Compound	CAS Number	LOR	Unit	EM2204587-011	EM2204587-012	EM2204587-013	EM2204587-014	EM2204587-015
				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	<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	%	104	112	98.3	105	101
13C8-PFOA	----	0.02	%	102	101	106	99.0	102



Analytical Results

Sub-Matrix: DI WATER LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220315_20_53_SS_Primary_ALS	SX_OB_20220316_00_04_SS_Primary_ALS	SX_OB_20220316_04_11_SS_Primary_ALS	----	----
Sampling date / time				15-Mar-2022 00:00	16-Mar-2022 00:00	16-Mar-2022 00:00	----	----
Compound	CAS Number	LOR	Unit	EM2204587-016	EM2204587-017	EM2204587-018	-----	-----
				Result	Result	Result	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----



Analytical Results

Sub-Matrix: DI WATER LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220315_20_53_SS_Primary_ALS	SX_OB_20220316_00_04_SS_Primary_ALS	SX_OB_20220316_04_11_SS_Primary_ALS	----	----
Sampling date / time				15-Mar-2022 00:00	16-Mar-2022 00:00	16-Mar-2022 00:00	----	----
Compound	CAS Number	LOR	Unit	EM2204587-016	EM2204587-017	EM2204587-018	-----	-----
				Result	Result	Result	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	<0.01	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	102	95.5	94.1	----	----
13C8-PFOA	----	0.02	%	101	106	101	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS	SX_OB_20220315_11_50_SS_Primary_ALS	SX_OB_20220315_15_58_SS_Triplicate_ALS	SX_OB_20220315_16_10_SS_Primary_ALS
Sampling date / time				15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10
Compound	CAS Number	LOR	Unit	EM2204587-001	EM2204587-002	EM2204587-005	EM2204587-006	EM2204587-007
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl ₂)	----	0.1	pH Unit	7.5	7.6	7.6	7.6	7.7
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	30.4	32.8	32.4	30.7	33.9
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	22	24	25	26	24
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	5	mg/kg	95	101	103	98	98
Copper	7440-50-8	5	mg/kg	48	52	53	57	64
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	<5	<5
Nickel	7440-02-0	5	mg/kg	120	140	134	132	146
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Silver	7440-22-4	2	mg/kg	<2	<2	<2	<2	<2
Tin	7440-31-5	10	mg/kg	<10	<10	<10	<10	<10
Zinc	7440-66-6	5	mg/kg	82	93	83	86	92
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	5	mg/kg	<5	<5	<5	<5	<5
EK040T: Fluoride Total								
Fluoride	16984-48-8	100	mg/kg	110	110	100	110	160
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Initial pH	----	0.1	pH Unit	9.2	8.8	9.1	8.9	9.3
After HCl pH	----	0.1	pH Unit	1.4	1.4	1.3	1.4	1.3
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	5.0	5.0
Final pH	----	0.1	pH Unit	5.1	5.1	5.1	5.0	5.0
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS	SX_OB_20220315_11_50_SS_Primary_ALS	SX_OB_20220315_15_58_SS_Triplicate_ALS	SX_OB_20220315_16_10_SS_Primary_ALS
Sampling date / time				15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10
Compound	CAS Number	LOR	Unit	EM2204587-001	EM2204587-002	EM2204587-005	EM2204587-006	EM2204587-007
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP074I: Volatile Halogenated Compounds								
Vinyl chloride	75-01-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethene	75-35-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	156-60-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene	156-59-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	67-66-3	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	71-55-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride	56-23-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	107-06-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethene	79-01-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	79-00-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethene	127-18-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	630-20-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	79-34-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Hexachlorobutadiene	87-68-3	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Chlorobenzene	108-90-7	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	106-46-7	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichlorobenzene	95-50-1	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,2,4-Trichlorobenzene	120-82-1	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
^ Sum of volatile chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
^ Sum of other chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
EP075A: Phenolic Compounds (Halogenated)								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS	SX_OB_20220315_11_50_SS_Primary_ALS	SX_OB_20220315_15_58_SS_Triplicate_ALS	SX_OB_20220315_16_10_SS_Primary_ALS
Sampling date / time				15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10
Compound	CAS Number	LOR	Unit	EM2204587-001	EM2204587-002	EM2204587-005	EM2204587-006	EM2204587-007
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Halogenated) - Continued								
2-Chlorophenol	95-57-8	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
2,4-Dichlorophenol	120-83-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
2,6-Dichlorophenol	87-65-0	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,4,5-Trichlorophenol	95-95-4	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
EP075A: Phenolic Compounds (Non-halogenated)								
Phenol	108-95-2	1	mg/kg	<1	<1	<1	<1	<1
2-Methylphenol	95-48-7	1	mg/kg	<1	<1	<1	<1	<1
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	<1	<1	<1
2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	<1	<1	<1
2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	<5	<5	<5
4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	<5	<5	<5
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	<5	<5	<5
Dinoseb	88-85-7	20	mg/kg	<20	<20	<20	<20	<20
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	20	mg/kg	<20	<20	<20	<20	<20
^ Sum of Phenols (non-halogenated)	----	20	mg/kg	<20	<20	<20	<20	<20
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS	SX_OB_20220315_11_50_SS_Primary_ALS	SX_OB_20220315_15_58_SS_Triplicate_ALS	SX_OB_20220315_16_10_SS_Primary_ALS
Sampling date / time				15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10
Compound	CAS Number	LOR	Unit	EM2204587-001	EM2204587-002	EM2204587-005	EM2204587-006	EM2204587-007
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Endosulfan 1	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan 2	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of organochlorine pesticides	----	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS	SX_OB_20220315_11_50_SS_Primary_ALS	SX_OB_20220315_15_58_SS_Triplicate_ALS	SX_OB_20220315_16_10_SS_Primary_ALS
Sampling date / time				15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10
Compound	CAS Number	LOR	Unit	EM2204587-001	EM2204587-002	EM2204587-005	EM2204587-006	EM2204587-007
				Result	Result	Result	Result	Result
EP075I: Organochlorine Pesticides - Continued								
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.30	mg/kg	<0.30	<0.30	<0.30	<0.30	<0.30
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	mg/kg	<20	<20	<20	<20	<20
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C6 - C10 Fraction	C6_C10	20	mg/kg	<20	<20	<20	<20	<20
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	mg/kg	<20	<20	<20	<20	<20
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorodecane sulfonic acid (PFDS)	335-77-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS	SX_OB_20220315_11_50_SS_Primary_ALS	SX_OB_20220315_15_58_SS_Triplicate_ALS	SX_OB_20220315_16_10_SS_Primary_ALS
Sampling date / time				15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10
Compound	CAS Number	LOR	Unit	EM2204587-001	EM2204587-002	EM2204587-005	EM2204587-006	EM2204587-007
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	5	µg/kg	<5	<5	<5	<5	<5
Perfluoropentanoic acid (PFPeA)	2706-90-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorohexanoic acid (PFHxA)	307-24-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoroheptanoic acid (PFHpA)	375-85-9	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorooctanoic acid (PFOA)	335-67-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorononanoic acid (PFNA)	375-95-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorodecanoic acid (PFDA)	335-76-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorododecanoic acid (PFDoDA)	307-55-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
EP231D: (n:2) Fluorotelomer Sulfonic Acids								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS	SX_OB_20220315_11_50_SS_Primary_ALS	SX_OB_20220315_15_58_SS_Triplicate_ALS	SX_OB_20220315_16_10_SS_Primary_ALS
Sampling date / time				15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10
Compound	CAS Number	LOR	Unit	EM2204587-001	EM2204587-002	EM2204587-005	EM2204587-006	EM2204587-007
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
EP231P: PFAS Sums								
Sum of PFAS	----	50.0	µg/kg	<50.0	<50.0	<50.0	<50.0	<50.0
Sum of PFHxS and PFOS	355-46-4/1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Sum of PFAS (WA DER List)	----	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	92.4	108	102	102	105
EP074S: VOC Surrogates (Ultra-Trace)								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	96.7	102	100	84.3	91.9
Toluene-D8	2037-26-5	0.1	%	97.0	100.0	99.2	82.0	91.0
4-Bromofluorobenzene	460-00-4	0.1	%	118	117	116	105	110
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	84.9	103	98.0	94.3	101
2-Chlorophenol-D4	93951-73-6	0.025	%	80.9	95.2	90.1	86.4	93.3
2,4,6-Tribromophenol	118-79-6	0.025	%	78.7	93.0	86.6	82.2	89.7
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								
Nitrobenzene-D5	4165-60-0	0.025	%	86.3	98.1	91.4	87.8	93.9
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	77.5	90.3	85.0	79.3	85.9
2-Fluorobiphenyl	321-60-8	0.025	%	88.9	104	97.0	93.1	99.2
Anthracene-d10	1719-06-8	0.025	%	86.7	100	94.0	90.4	97.8
4-Terphenyl-d14	1718-51-0	0.025	%	90.9	107	99.9	95.7	104
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	105	87.8	91.3	87.5	84.1
13C8-PFOA	----	0.0002	%	103	101	97.1	93.9	97.2



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_20_53_SS_Primary_ALS	SX_OB_20220316_00_04_SS_Primary_ALS	SX_OB_20220316_04_11_SS_Primary_ALS	SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS
Sampling date / time				15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	15-Mar-2022 00:00	15-Mar-2022 00:00
Compound	CAS Number	LOR	Unit	EM2204587-008	EM2204587-009	EM2204587-010	EM2204587-011	EM2204587-012
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	7.6	7.8	7.8	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	33.7	32.3	33.9	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	28	25	25	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	----
Chromium	7440-47-3	5	mg/kg	107	98	98	----	----
Copper	7440-50-8	5	mg/kg	56	45	43	----	----
Lead	7439-92-1	5	mg/kg	<5	<5	<5	----	----
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	----	----
Nickel	7440-02-0	5	mg/kg	131	122	120	----	----
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	----	----
Silver	7440-22-4	2	mg/kg	<2	<2	<2	----	----
Tin	7440-31-5	10	mg/kg	<10	<10	<10	----	----
Zinc	7440-66-6	5	mg/kg	83	80	78	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	----	----
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	<1.0	----	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	5	mg/kg	<5	<5	<5	----	----
EK040T: Fluoride Total								
Fluoride	16984-48-8	100	mg/kg	110	100	100	----	----
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Initial pH	----	0.1	pH Unit	9.0	8.9	9.0	----	----
After HCl pH	----	0.1	pH Unit	1.3	1.4	1.4	----	----
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	----	----
Final pH	----	0.1	pH Unit	5.1	5.0	5.1	----	----
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Final pH	----	0.1	pH Unit	----	----	----	9.1	9.0
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_20_53_SS_Primary_ALS	SX_OB_20220316_00_04_SS_Primary_ALS	SX_OB_20220316_04_11_SS_Primary_ALS	SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS
Sampling date / time				15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	15-Mar-2022 00:00	15-Mar-2022 00:00
Compound	CAS Number	LOR	Unit	EM2204587-008	EM2204587-009	EM2204587-010	EM2204587-011	EM2204587-012
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	----	----
EP074I: Volatile Halogenated Compounds								
Vinyl chloride	75-01-4	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1-Dichloroethene	75-35-4	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
trans-1,2-Dichloroethene	156-60-5	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
cis-1,2-Dichloroethene	156-59-2	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Chloroform	67-66-3	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1,1-Trichloroethane	71-55-6	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Carbon Tetrachloride	56-23-5	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,2-Dichloroethane	107-06-2	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Trichloroethene	79-01-6	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1,2-Trichloroethane	79-00-5	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Tetrachloroethene	127-18-4	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1,1,2-Tetrachloroethane	630-20-6	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1,2,2-Tetrachloroethane	79-34-5	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Hexachlorobutadiene	87-68-3	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Chlorobenzene	108-90-7	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,4-Dichlorobenzene	106-46-7	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,2-Dichlorobenzene	95-50-1	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,2,4-Trichlorobenzene	120-82-1	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
^ Sum of volatile chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
^ Sum of other chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_20_53_SS_Primary_ALS	SX_OB_20220316_00_04_SS_Primary_ALS	SX_OB_20220316_04_11_SS_Primary_ALS	SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS
Sampling date / time				15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	15-Mar-2022 00:00	15-Mar-2022 00:00
Compound	CAS Number	LOR	Unit	EM2204587-008	EM2204587-009	EM2204587-010	EM2204587-011	EM2204587-012
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Halogenated)								
2-Chlorophenol	95-57-8	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
2,4-Dichlorophenol	120-83-2	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
2,6-Dichlorophenol	87-65-0	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<1.00	<1.00	<1.00	----	----
2,4,5-Trichlorophenol	95-95-4	1.00	mg/kg	<1.00	<1.00	<1.00	----	----
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<1.00	<1.00	<1.00	----	----
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	<0.03	----	----
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	<1.0	<1.0	----	----
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<1.00	<1.00	<1.00	----	----
EP075A: Phenolic Compounds (Non-halogenated)								
Phenol	108-95-2	1	mg/kg	<1	<1	<1	----	----
2-Methylphenol	95-48-7	1	mg/kg	<1	<1	<1	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	----	----
2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	<1	----	----
2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	<1	----	----
2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	<5	----	----
4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	<5	----	----
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	<5	----	----
Dinoseb	88-85-7	20	mg/kg	<20	<20	<20	----	----
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	20	mg/kg	<20	<20	<20	----	----
^ Sum of Phenols (non-halogenated)	----	20	mg/kg	<20	<20	<20	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_20_53_SS_Primary_ALS	SX_OB_20220316_00_04_SS_Primary_ALS	SX_OB_20220316_04_11_SS_Primary_ALS	SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS
Sampling date / time				15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	15-Mar-2022 00:00	15-Mar-2022 00:00
Compound	CAS Number	LOR	Unit	EM2204587-008	EM2204587-009	EM2204587-010	EM2204587-011	EM2204587-012
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	<1.0	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	<0.03	----	----
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	<0.03	----	----
Endosulfan 1	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endosulfan 2	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4`-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Sum of organochlorine pesticides	----	0.10	mg/kg	<0.10	<0.10	<0.10	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_20_53_SS_Primary_ALS	SX_OB_20220316_00_04_SS_Primary_ALS	SX_OB_20220316_04_11_SS_Primary_ALS	SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS
Sampling date / time				15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	15-Mar-2022 00:00	15-Mar-2022 00:00
Compound	CAS Number	LOR	Unit	EM2204587-008	EM2204587-009	EM2204587-010	EM2204587-011	EM2204587-012
				Result	Result	Result	Result	Result
EP075I: Organochlorine Pesticides - Continued								
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.30	mg/kg	<0.30	<0.30	<0.30	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	<0.10	----	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	<0.03	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	mg/kg	<20	<20	<20	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	----	----
C6 - C10 Fraction	C6_C10	20	mg/kg	<20	<20	<20	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	----
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	----	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	mg/kg	<20	<20	<20	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	5.0	µg/kg	<5.0	<5.0	<5.0	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_20_53_SS_Primary_ALS	SX_OB_20220316_00_04_SS_Primary_ALS	SX_OB_20220316_04_11_SS_Primary_ALS	SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS
Sampling date / time				15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	15-Mar-2022 00:00	15-Mar-2022 00:00
Compound	CAS Number	LOR	Unit	EM2204587-008	EM2204587-009	EM2204587-010	EM2204587-011	EM2204587-012
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	5	µg/kg	<5	<5	<5	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorononanoic acid (PFNA)	375-95-1	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	10.0	µg/kg	<10.0	<10.0	<10.0	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	10.0	µg/kg	<10.0	<10.0	<10.0	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_20_53_SS_Primary_ALS	SX_OB_20220316_00_04_SS_Primary_ALS	SX_OB_20220316_04_11_SS_Primary_ALS	SX_OB_20220315_08_04_SS_Primary_ALS	SX_OB_20220315_08_05_SS_Duplicate_ALS
Sampling date / time				15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	15-Mar-2022 00:00	15-Mar-2022 00:00
Compound	CAS Number	LOR	Unit	EM2204587-008	EM2204587-009	EM2204587-010	EM2204587-011	EM2204587-012
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10.0	µg/kg	<10.0	<10.0	<10.0	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	50.0	µg/kg	<50.0	<50.0	<50.0	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Sum of PFAS (WA DER List)	----	10.0	µg/kg	<10.0	<10.0	<10.0	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	96.5	103	103	----	----
EP074S: VOC Surrogates (Ultra-Trace)								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	92.5	90.2	97.5	----	----
Toluene-D8	2037-26-5	0.1	%	93.5	89.2	98.3	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	108	105	113	----	----
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	85.5	94.8	92.6	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%	79.1	88.9	87.5	----	----
2,4,6-Tribromophenol	118-79-6	0.025	%	74.0	85.8	85.9	----	----
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								
Nitrobenzene-D5	4165-60-0	0.025	%	81.0	94.2	91.5	----	----
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	73.6	82.7	80.4	----	----
2-Fluorobiphenyl	321-60-8	0.025	%	85.1	95.4	93.4	----	----
Anthracene-d10	1719-06-8	0.025	%	83.1	92.6	92.3	----	----
4-Terphenyl-d14	1718-51-0	0.025	%	86.3	95.6	94.1	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	77.3	91.3	78.6	----	----
13C8-PFOA	----	0.0002	%	101	99.2	101	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220315_11 _50_SS_Primary_ALS	SX_OB_20220315_15 _58_SS_Triplicate_AL S	SX_OB_20220315_16 _10_SS_Primary_ALS	SX_OB_20220315_20 _53_SS_Primary_ALS	SX_OB_20220316_00 _04_SS_Primary_ALS
Sampling date / time				15-Mar-2022 00:00	15-Mar-2022 00:00	15-Mar-2022 00:00	15-Mar-2022 00:00	16-Mar-2022 00:00
Compound	CAS Number	LOR	Unit	EM2204587-013	EM2204587-014	EM2204587-015	EM2204587-016	EM2204587-017
				Result	Result	Result	Result	Result
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Final pH	----	0.1	pH Unit	9.0	8.9	9.4	9.0	9.2



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SX_OB_20220316_04 _11_SS_Primary_ALS	----	----	----	----
			Sampling date / time	16-Mar-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2204587-018	-----	-----	-----	-----
				Result	---	---	---	---
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Final pH	----	0.1	pH Unit	9.3	---	---	---	---



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID		SX_OB_20220315_08 _30_SR_Primary_ALS	SX_OB_20220315_08 _32_SB_Primary_ALS	----	----	----
Sampling date / time			15-Mar-2022 08:30		15-Mar-2022 08:32		----	----	----
Compound	CAS Number	LOR	Unit	EM2204587-003	EM2204587-004	-----	-----	-----	
				Result	Result	---	---	---	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.10	µg/L	<0.10	<0.10	----	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SX_OB_20220315_08 _30_SR_Primary_ALS	SX_OB_20220315_08 _32_SB_Primary_ALS	----	----	----
Sampling date / time				15-Mar-2022 08:30	15-Mar-2022 08:32	----	----	----	
Compound	CAS Number	LOR	Unit	EM2204587-003	EM2204587-004	-----	-----	-----	
				Result	Result	---	---	---	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	----	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	----	----	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	----	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	----	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	----	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	----	----	----	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	----	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----	
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	----	----	----	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%	98.8	105	----	----	----	
13C8-PFOA	----	0.02	%	101	102	----	----	----	



Surrogate Control Limits

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

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

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	41	122
EP074S: VOC Surrogates (Ultra-Trace)			
1,2-Dichloroethane-D4	17060-07-0	59	119
Toluene-D8	2037-26-5	55	117
4-Bromofluorobenzene	460-00-4	59	123
EP075S: Acid Extractable Surrogates (Waste Classification)			
Phenol-d6	13127-88-3	63	134
2-Chlorophenol-D4	93951-73-6	60	125
2,4,6-Tribromophenol	118-79-6	54	129
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)			
Nitrobenzene-D5	4165-60-0	63	131
1,2-Dichlorobenzene-D4	2199-69-1	61	124
2-Fluorobiphenyl	321-60-8	69	131
Anthracene-d10	1719-06-8	70	133
4-Terphenyl-d14	1718-51-0	59	141
EP231S: PFAS Surrogate			
13C4-PFOS	----	68	136
13C8-PFOA	----	69	133

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

Automated Guideline Comparison Report

EPA Victoria Publication IWRG 621 (2009) - Table 2: Soil Hazard Categorisation

Work Order	: EM2204587	Page	: 1 of 26
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: CRAIG TRIMBUR		
Address	: D1.1 63-85 TURNER STREET PORT MELBOURNE 3207	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: ----	E-mail	: bronwyn.sheen@alsglobal.com
Telephone	: ----	Telephone	: +6138549 9600
Facsimile	: ----	Facsimile	: +61-3-8549 9626
Project	: JC0927	Date Received	: 16-Mar-2022 16:15
Order number	: ----	Date Analysed	: 18-Mar-2022
C-O-C number	: 20220316074921-ALS-20	Date Issued	: 23-Mar-2022 20:23
No. of samples received	: 18		
No. of samples analysed	: 18	Quote number	: EN/150/19 -WGTP -Bulk Sample Quote

General Comments

This guideline comparison report **only** provides comparison of total concentration data against upper limit thresholds for the 'Fill Material', 'C', 'B' Categories in Table 2 of EPA Publication IWRG621.

This guideline comparison report is **NOT** a soil classification report. Classification of soils as Fill Material, Category C, Category B or Category A requires consideration of a number of other factors including preliminary site investigation, sampling density and statistical calculations, as set out in EPA Publication IWRG 702 and measurement uncertainty.

This guideline comparison report only provides comparison data for parameters, specifically listed within the IWRG621 (2009) guideline, that are analysed by ALS.

Only results in the 'Analytical Results' section have been compared to the guideline.

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



Summary of Thresholds Reached or Exceeded

EPA Victoria Publication IWRG 621 (2009)

Table 2: Soil Hazard Categorisation Thresholds : Fill Material

Client Sample ID	ALS Sample ID	Compound	Method	LOR	Limits	Result
SX_OB_20220315_08_04 SS_Primary_ALS	EM2204587-001	Arsenic	EG005T	5	< 20 mg/kg	22 mg/kg
SX_OB_20220315_08_04 SS_Primary_ALS	EM2204587-001	Nickel	EG005T	5	< 60 mg/kg	120 mg/kg
SX_OB_20220315_08_05 SS_Duplicate_ALS	EM2204587-002	Arsenic	EG005T	5	< 20 mg/kg	24 mg/kg
SX_OB_20220315_08_05 SS_Duplicate_ALS	EM2204587-002	Nickel	EG005T	5	< 60 mg/kg	140 mg/kg
SX_OB_20220315_11_50 SS_Primary_ALS	EM2204587-005	Arsenic	EG005T	5	< 20 mg/kg	25 mg/kg
SX_OB_20220315_11_50 SS_Primary_ALS	EM2204587-005	Nickel	EG005T	5	< 60 mg/kg	134 mg/kg
SX_OB_20220315_15_58 SS_Triplicate_ALS	EM2204587-006	Arsenic	EG005T	5	< 20 mg/kg	26 mg/kg
SX_OB_20220315_15_58 SS_Triplicate_ALS	EM2204587-006	Nickel	EG005T	5	< 60 mg/kg	132 mg/kg
SX_OB_20220315_16_10 SS_Primary_ALS	EM2204587-007	Arsenic	EG005T	5	< 20 mg/kg	24 mg/kg
SX_OB_20220315_16_10 SS_Primary_ALS	EM2204587-007	Nickel	EG005T	5	< 60 mg/kg	146 mg/kg
SX_OB_20220315_20_53 SS_Primary_ALS	EM2204587-008	Arsenic	EG005T	5	< 20 mg/kg	28 mg/kg
SX_OB_20220315_20_53 SS_Primary_ALS	EM2204587-008	Nickel	EG005T	5	< 60 mg/kg	131 mg/kg
SX_OB_20220316_00_04 SS_Primary_ALS	EM2204587-009	Arsenic	EG005T	5	< 20 mg/kg	25 mg/kg
SX_OB_20220316_00_04 SS_Primary_ALS	EM2204587-009	Nickel	EG005T	5	< 60 mg/kg	122 mg/kg
SX_OB_20220316_04_11 SS_Primary_ALS	EM2204587-010	Arsenic	EG005T	5	< 20 mg/kg	25 mg/kg
SX_OB_20220316_04_11 SS_Primary_ALS	EM2204587-010	Nickel	EG005T	5	< 60 mg/kg	120 mg/kg



Analytical Results

Soil Hazard Categorisation and Management

Table 2: Soil Hazard Categorisation Thresholds : Category B: Table 2: Soil Hazard Categorisation Thresholds : Category B

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		Guideline	Guideline	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Sampling date/time				315_08_04_S	315_08_05_S	315_11_50_S	315_15_58_S	315_16_10_S
				Lower Limit	Upper Limit			S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS
							15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10	
							EM2204587-001 MU	EM2204587-002 MU	EM2204587-005 MU	EM2204587-006 MU	EM2204587-007 MU	
EA001: pH in soil using 0.01M CaCl2 extract												
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5		7.5 ± 0.1	7.6 ± 0.1	7.6 ± 0.1	7.6 ± 0.1	7.7 ± 0.1	
EG005(ED093)T: Total Metals by ICP-AES												
Arsenic	EG005T	5	mg/kg	----	2000		22 ± 3	24 ± 4	25 ± 4	26 ± 4	24 ± 4	
Cadmium	EG005T	1	mg/kg	----	400		<1 --	<1 --	<1 --	<1 --	<1 --	
Copper	EG005T	5	mg/kg	----	20000		48 ± 6	52 ± 6	53 ± 6	57 ± 7	64 ± 8	
Lead	EG005T	5	mg/kg	----	6000		<5 --	<5 --	<5 --	<5 --	<5 --	
Molybdenum	EG005T	5	mg/kg	----	4000		<5 --	<5 --	<5 --	<5 --	<5 --	
Nickel	EG005T	5	mg/kg	----	12000		120 ± 12	140 ± 14	134 ± 13	132 ± 13	146 ± 14	
Selenium	EG005T	5	mg/kg	----	200		<5 --	<5 --	<5 --	<5 --	<5 --	
Silver	EG005T	2	mg/kg	----	720		<2 --	<2 --	<2 --	<2 --	<2 --	
Zinc	EG005T	5	mg/kg	----	140000		82 ± 9	93 ± 10	83 ± 9	86 ± 10	92 ± 10	
EG035T: Total Recoverable Mercury by FIMS												
Mercury	EG035T	0.1	mg/kg	----	300		<0.1 --	<0.1 --	<0.1 --	<0.1 --	<0.1 --	
EG048: Hexavalent Chromium (Alkaline Digest)												
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000		<1.0 --	<1.0 --	<1.0 --	<1.0 --	<1.0 --	
EK026SF: Total CN by Segmented Flow Analyser												
Total Cyanide	EK026SF	5	mg/kg	----	10000		<5 --	<5 --	<5 --	<5 --	<5 --	
EK040T: Fluoride Total												
Fluoride	EK040T	100	mg/kg	----	40000		110 ± 30	110 ± 30	100 ± 30	110 ± 30	160 ± 40	
EP074A: Monocyclic Aromatic Hydrocarbons												
Benzene	EP074-UT	0.2	mg/kg	----	16		<0.2 --	<0.2 --	<0.2 --	<0.2 --	<0.2 --	
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	240		<0.5 --	<0.5 --	<0.5 --	<0.5 --	<0.5 --	
EP074I: Volatile Halogenated Compounds												
Vinyl chloride	EP074-UT	0.50	mg/kg	----	4.8		<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --	
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	11		<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --	
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	50		<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --	
EP075A: Phenolic Compounds (Halogenated)												
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	320		<1.00 --	<1.00 --	<1.00 --	<1.00 --	<1.00 --	



Soil Hazard Categorisation and Management

Table 2: Soil Hazard Categorisation Thresholds : Category B: Table 2: Soil Hazard Categorisation Thresholds : Category B

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	315_08_04_S	315_08_05_S	315_11_50_S	315_15_58_S	315_16_10_S
						S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10
						EM2204587-001 MU	EM2204587-002 MU	EM2204587-005 MU	EM2204587-006 MU	EM2204587-007 MU
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	400	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP075I: Organochlorine Pesticides										
Heptachlor	EP075-EM	0.05	mg/kg	----	4.8	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	4.8	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	16	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	50	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	2600	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	40000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



Soil Hazard Categorisation and Management

Table 2: Soil Hazard Categorisation Thresholds : Category C: Table 2: Soil Hazard Categorisation Thresholds : Category C

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 315_08_04_S S_Primary_AL S	SX_OB_20220 315_08_05_S S_Duplicate_ ALS	SX_OB_20220 315_11_50_S S_Primary_AL S	SX_OB_20220 315_15_58_S S_Triplicate_ ALS	SX_OB_20220 315_16_10_S S_Primary_AL S
				Guideline	Guideline	15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10
				Lower Limit	Upper Limit	EM2204587-001 MU	EM2204587-002 MU	EM2204587-005 MU	EM2204587-006 MU	EM2204587-007 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.5 ± 0.1	7.6 ± 0.1	7.6 ± 0.1	7.6 ± 0.1	7.7 ± 0.1
EG005(ED093)T: Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	500	22 ± 3	24 ± 4	25 ± 4	26 ± 4	24 ± 4
Cadmium	EG005T	1	mg/kg	----	100	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..
Copper	EG005T	5	mg/kg	----	5000	48 ± 6	52 ± 6	53 ± 6	57 ± 7	64 ± 8
Lead	EG005T	5	mg/kg	----	1500	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Molybdenum	EG005T	5	mg/kg	----	1000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Nickel	EG005T	5	mg/kg	----	3000	120 ± 12	140 ± 14	134 ± 13	132 ± 13	146 ± 14
Selenium	EG005T	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Silver	EG005T	2	mg/kg	----	180	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..
Tin	EG005T	10	mg/kg	----	500	<10 ..	<10 ..	<10 ..	<10 ..	<10 ..
Zinc	EG005T	5	mg/kg	----	35000	82 ± 9	93 ± 10	83 ± 9	86 ± 10	92 ± 10
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	10000	110 ± 30	110 ± 30	100 ± 30	110 ± 30	160 ± 40
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	4	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	70	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP074I: Volatile Halogenated Compounds										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	1.2	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	2.8	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	10	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	10	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..



Soil Hazard Categorisation and Management

Table 2: Soil Hazard Categorisation Thresholds : Category C: Table 2: Soil Hazard Categorisation Thresholds : Category C

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	315_08_04_S	315_08_05_S	315_11_50_S	315_15_58_S	315_16_10_S
						S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10
						EM2204587-001 MU	EM2204587-002 MU	EM2204587-005 MU	EM2204587-006 MU	EM2204587-007 MU
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	560	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	5	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	100	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP075I: Organochlorine Pesticides										
Heptachlor	EP075-EM	0.05	mg/kg	----	1.2	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	1.2	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	4	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	10	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	650	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	10000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



Soil Hazard Categorisation and Management

Table 2: Soil Hazard Categorisation Thresholds : Fill Material: Table 2: Soil Hazard Categorisation Thresholds : Fill Material

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	315_08_04_S	315_08_05_S	315_11_50_S	315_15_58_S	315_16_10_S
						S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10
						EM2204587-001 MU	EM2204587-002 MU	EM2204587-005 MU	EM2204587-006 MU	EM2204587-007 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.5 ± 0.1	7.6 ± 0.1	7.6 ± 0.1	7.6 ± 0.1	7.7 ± 0.1
EG005(ED093)T: Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	20	22 ± 3	24 ± 4	25 ± 4	26 ± 4	24 ± 4
Cadmium	EG005T	1	mg/kg	----	3	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..
Copper	EG005T	5	mg/kg	----	100	48 ± 6	52 ± 6	53 ± 6	57 ± 7	64 ± 8
Lead	EG005T	5	mg/kg	----	300	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Molybdenum	EG005T	5	mg/kg	----	40	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Nickel	EG005T	5	mg/kg	----	60	120 ± 12	140 ± 14	134 ± 13	132 ± 13	146 ± 14
Selenium	EG005T	5	mg/kg	----	10	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Silver	EG005T	2	mg/kg	----	10	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..
Tin	EG005T	10	mg/kg	----	50	<10 ..	<10 ..	<10 ..	<10 ..	<10 ..
Zinc	EG005T	5	mg/kg	----	200	82 ± 9	93 ± 10	83 ± 9	86 ± 10	92 ± 10
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	450	110 ± 30	110 ± 30	100 ± 30	110 ± 30	160 ± 40
EP066: Polychlorinated Biphenyls (PCB)										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	1	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	7	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP074I: Volatile Halogenated Compounds										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..
EP075A: Phenolic Compounds (Non-halogenated)										



Soil Hazard Categorisation and Management

Table 2: Soil Hazard Categorisation Thresholds : Fill Material: Table 2: Soil Hazard Categorisation Thresholds : Fill Material

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	315_08_04_S	315_08_05_S	315_11_50_S	315_15_58_S	315_16_10_S
						S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	15-Mar-2022 08:04	15-Mar-2022 08:04	15-Mar-2022 11:50	15-Mar-2022 15:58	15-Mar-2022 16:10
						EM2204587-001 MU	EM2204587-002 MU	EM2204587-005 MU	EM2204587-006 MU	EM2204587-007 MU
EP075A: Phenolic Compounds (Non-halogenated) - Continued										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	60	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	1	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP075I: Organochlorine Pesticides										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	100	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	1000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



Soil Hazard Categorisation and Management

Table 2: Soil Hazard Categorisation Thresholds : Category B: Table 2: Soil Hazard Categorisation Thresholds : Category B

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 315_20_53_S S_Primary_AL S	SX_OB_20220 316_00_04_S S_Primary_AL S	SX_OB_20220 316_04_11_S S_Primary_AL S	SX_OB_20220 315_08_04_S S_Primary_AL S	SX_OB_20220 315_08_05_S S_Duplicate_ ALS
				Lower Limit	Upper Limit	15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	15-Mar-2022 15:00	15-Mar-2022 15:00
						EM2204587-008 MU	EM2204587-009 MU	EM2204587-010 MU	EM2204587-011 MU	EM2204587-012 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5	7.6 ± 0.1	7.8 ± 0.1	7.8 ± 0.1	----	----
EG005(ED093T): Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	2000	28 ± 4	25 ± 4	25 ± 4	----	----
Cadmium	EG005T	1	mg/kg	----	400	<1 --	<1 --	<1 --	----	----
Copper	EG005T	5	mg/kg	----	20000	56 ± 7	45 ± 6	43 ± 5	----	----
Lead	EG005T	5	mg/kg	----	6000	<5 --	<5 --	<5 --	----	----
Molybdenum	EG005T	5	mg/kg	----	4000	<5 --	<5 --	<5 --	----	----
Nickel	EG005T	5	mg/kg	----	12000	131 ± 13	122 ± 12	120 ± 12	----	----
Selenium	EG005T	5	mg/kg	----	200	<5 --	<5 --	<5 --	----	----
Silver	EG005T	2	mg/kg	----	720	<2 --	<2 --	<2 --	----	----
Zinc	EG005T	5	mg/kg	----	140000	83 ± 9	80 ± 9	78 ± 9	----	----
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	300	<0.1 --	<0.1 --	<0.1 --	----	----
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000	<1.0 --	<1.0 --	<1.0 --	----	----
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	10000	<5 --	<5 --	<5 --	----	----
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	40000	110 ± 30	100 ± 30	100 ± 30	----	----
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	16	<0.2 --	<0.2 --	<0.2 --	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	240	<0.5 --	<0.5 --	<0.5 --	----	----
EP074I: Volatile Halogenated Compounds										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	4.8	<0.50 --	<0.50 --	<0.50 --	----	----
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	11	<0.50 --	<0.50 --	<0.50 --	----	----
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	50	<0.50 --	<0.50 --	<0.50 --	----	----
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	320	<1.00 --	<1.00 --	<1.00 --	----	----
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 --	<20 --	<20 --	----	----
EP075B: Polynuclear Aromatic Hydrocarbons										



Soil Hazard Categorisation and Management

Table 2: Soil Hazard Categorisation Thresholds : Category B: Table 2: Soil Hazard Categorisation Thresholds : Category B

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 315_20_53_S S_Primary_AL S	SX_OB_20220 316_00_04_S S_Primary_AL S	SX_OB_20220 316_04_11_S S_Primary_AL S	SX_OB_20220 315_08_04_S S_Primary_AL S	SX_OB_20220 315_08_05_S S_Duplicate_ ALS
				Lower Limit	Upper Limit	15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	15-Mar-2022 15:00	15-Mar-2022 15:00
						EM2204587-008 MU	EM2204587-009 MU	EM2204587-010 MU	EM2204587-011 MU	EM2204587-012 MU
EP075B: Polynuclear Aromatic Hydrocarbons - Continued										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	20	<0.5	<0.5	<0.5	----	----
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	400	<0.5	<0.5	<0.5	----	----
EP075I: Organochlorine Pesticides										
Heptachlor	EP075-EM	0.05	mg/kg	----	4.8	<0.05	<0.05	<0.05	----	----
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	4.8	<0.30	<0.30	<0.30	----	----
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05	<0.05	<0.05	----	----
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	16	<0.10	<0.10	<0.10	----	----
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	50	<0.03	<0.03	<0.03	----	----
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	2600	<20	<20	<20	----	----
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	40000	<50	<50	<50	----	----



Soil Hazard Categorisation and Management

Table 2: Soil Hazard Categorisation Thresholds : Category C: Table 2: Soil Hazard Categorisation Thresholds : Category C

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 315_20_53_S S_Primary_AL S	SX_OB_20220 316_00_04_S S_Primary_AL S	SX_OB_20220 316_04_11_S S_Primary_AL S	SX_OB_20220 315_08_04_S S_Primary_AL S	SX_OB_20220 315_08_05_S S_Duplicate_ ALS
				Lower Limit	Upper Limit	15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	15-Mar-2022 15:00	15-Mar-2022 15:00
						EM2204587-008 MU	EM2204587-009 MU	EM2204587-010 MU	EM2204587-011 MU	EM2204587-012 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.6 ± 0.1	7.8 ± 0.1	7.8 ± 0.1	----	----
EG005(ED093T): Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	500	28 ± 4	25 ± 4	25 ± 4	----	----
Cadmium	EG005T	1	mg/kg	----	100	<1 --	<1 --	<1 --	----	----
Copper	EG005T	5	mg/kg	----	5000	56 ± 7	45 ± 6	43 ± 5	----	----
Lead	EG005T	5	mg/kg	----	1500	<5 --	<5 --	<5 --	----	----
Molybdenum	EG005T	5	mg/kg	----	1000	<5 --	<5 --	<5 --	----	----
Nickel	EG005T	5	mg/kg	----	3000	131 ± 13	122 ± 12	120 ± 12	----	----
Selenium	EG005T	5	mg/kg	----	50	<5 --	<5 --	<5 --	----	----
Silver	EG005T	2	mg/kg	----	180	<2 --	<2 --	<2 --	----	----
Tin	EG005T	10	mg/kg	----	500	<10 --	<10 --	<10 --	----	----
Zinc	EG005T	5	mg/kg	----	35000	83 ± 9	80 ± 9	78 ± 9	----	----
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 --	<0.1 --	<0.1 --	----	----
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	<1.0 --	<1.0 --	<1.0 --	----	----
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 --	<5 --	<5 --	----	----
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	10000	110 ± 30	100 ± 30	100 ± 30	----	----
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	4	<0.2 --	<0.2 --	<0.2 --	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	70	<0.5 --	<0.5 --	<0.5 --	----	----
EP074I: Volatile Halogenated Compounds										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	1.2	<0.50 --	<0.50 --	<0.50 --	----	----
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	2.8	<0.50 --	<0.50 --	<0.50 --	----	----
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	10	<0.50 --	<0.50 --	<0.50 --	----	----
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	10	<1.00 --	<1.00 --	<1.00 --	----	----
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	560	<20 --	<20 --	<20 --	----	----



Soil Hazard Categorisation and Management

Table 2: Soil Hazard Categorisation Thresholds : Category C: Table 2: Soil Hazard Categorisation Thresholds : Category C

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 315_20_53_S S_Primary_AL S	SX_OB_20220 316_00_04_S S_Primary_AL S	SX_OB_20220 316_04_11_S S_Primary_AL S	SX_OB_20220 315_08_04_S S_Primary_AL S	SX_OB_20220 315_08_05_S S_Duplicate_ ALS
				Lower Limit	Upper Limit	15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	15-Mar-2022 15:00	15-Mar-2022 15:00
						EM2204587-008 MU	EM2204587-009 MU	EM2204587-010 MU	EM2204587-011 MU	EM2204587-012 MU
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	5	<0.5	<0.5	<0.5	----	----
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	100	<0.5	<0.5	<0.5	----	----
EP075I: Organochlorine Pesticides										
Heptachlor	EP075-EM	0.05	mg/kg	----	1.2	<0.05	<0.05	<0.05	----	----
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	1.2	<0.30	<0.30	<0.30	----	----
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05	<0.05	<0.05	----	----
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	4	<0.10	<0.10	<0.10	----	----
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	10	<0.03	<0.03	<0.03	----	----
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	650	<20	<20	<20	----	----
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	10000	<50	<50	<50	----	----



Soil Hazard Categorisation and Management

Table 2: Soil Hazard Categorisation Thresholds : Fill Material: Table 2: Soil Hazard Categorisation Thresholds : Fill Material

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 315_20_53_S S_Primary_AL S	SX_OB_20220 316_00_04_S S_Primary_AL S	SX_OB_20220 316_04_11_S S_Primary_AL S	SX_OB_20220 315_08_04_S S_Primary_AL S	SX_OB_20220 315_08_05_S S_Duplicate_ ALS
				Guideline	Guideline	15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	15-Mar-2022 15:00	15-Mar-2022 15:00
				Lower Limit	Upper Limit	EM2204587-008 MU	EM2204587-009 MU	EM2204587-010 MU	EM2204587-011 MU	EM2204587-012 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.6 ± 0.1	7.8 ± 0.1	7.8 ± 0.1	----	----
EG005(ED093T): Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	20	28 ± 4	25 ± 4	25 ± 4	----	----
Cadmium	EG005T	1	mg/kg	----	3	<1 --	<1 --	<1 --	----	----
Copper	EG005T	5	mg/kg	----	100	56 ± 7	45 ± 6	43 ± 5	----	----
Lead	EG005T	5	mg/kg	----	300	<5 --	<5 --	<5 --	----	----
Molybdenum	EG005T	5	mg/kg	----	40	<5 --	<5 --	<5 --	----	----
Nickel	EG005T	5	mg/kg	----	60	131 ± 13	122 ± 12	120 ± 12	----	----
Selenium	EG005T	5	mg/kg	----	10	<5 --	<5 --	<5 --	----	----
Silver	EG005T	2	mg/kg	----	10	<2 --	<2 --	<2 --	----	----
Tin	EG005T	10	mg/kg	----	50	<10 --	<10 --	<10 --	----	----
Zinc	EG005T	5	mg/kg	----	200	83 ± 9	80 ± 9	78 ± 9	----	----
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 --	<0.1 --	<0.1 --	----	----
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	<1.0 --	<1.0 --	<1.0 --	----	----
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 --	<5 --	<5 --	----	----
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	450	110 ± 30	100 ± 30	100 ± 30	----	----
EP066: Polychlorinated Biphenyls (PCB)										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 --	<0.1 --	<0.1 --	----	----
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	1	<0.2 --	<0.2 --	<0.2 --	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	7	<0.5 --	<0.5 --	<0.5 --	----	----
EP074I: Volatile Halogenated Compounds										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 --	<0.50 --	<0.50 --	----	----
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 --	<1.00 --	<1.00 --	----	----
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	60	<20 --	<20 --	<20 --	----	----



Soil Hazard Categorisation and Management

Table 2: Soil Hazard Categorisation Thresholds : Fill Material: Table 2: Soil Hazard Categorisation Thresholds : Fill Material

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	315_20_53_S	316_00_04_S	316_04_11_S	315_08_04_S	315_08_05_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS
				Lower Limit	Upper Limit	15-Mar-2022 20:53	16-Mar-2022 00:04	16-Mar-2022 04:11	15-Mar-2022 15:00	15-Mar-2022 15:00
						EM2204587-008 MU	EM2204587-009 MU	EM2204587-010 MU	EM2204587-011 MU	EM2204587-012 MU
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	1	<0.5 ..	<0.5 ..	<0.5 ..	----	----
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	----	----
EP075I: Organochlorine Pesticides										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10 ..	<0.10 ..	<0.10 ..	----	----
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	100	<20 ..	<20 ..	<20 ..	----	----
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	1000	<50 ..	<50 ..	<50 ..	----	----



Soil Hazard Categorisation and Management

Table 2: Soil Hazard Categorisation Thresholds : Category B: Table 2: Soil Hazard Categorisation Thresholds : Category B

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	315_11_50_S	315_15_58_S	315_16_10_S	315_20_53_S	316_00_04_S
						S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	15-Mar-2022 15:00	15-Mar-2022 15:00	15-Mar-2022 15:00	15-Mar-2022 15:00	16-Mar-2022 15:00
						EM2204587-013 MU	EM2204587-014 MU	EM2204587-015 MU	EM2204587-016 MU	EM2204587-017 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----
EG005(ED093T): Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	----	----	----	----	----	----
Cadmium	EG005T	1	mg/kg	----	----	----	----	----	----	----
Copper	EG005T	5	mg/kg	----	----	----	----	----	----	----
Lead	EG005T	5	mg/kg	----	----	----	----	----	----	----
Molybdenum	EG005T	5	mg/kg	----	----	----	----	----	----	----
Nickel	EG005T	5	mg/kg	----	----	----	----	----	----	----
Selenium	EG005T	5	mg/kg	----	----	----	----	----	----	----
Silver	EG005T	2	mg/kg	----	----	----	----	----	----	----
Zinc	EG005T	5	mg/kg	----	----	----	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----
EP074I: Volatile Halogenated Compounds										
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	----	----	----	----	----	----
Vinyl chloride	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	----	----	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons										



Soil Hazard Categorisation and Management

Table 2: Soil Hazard Categorisation Thresholds : Category B: Table 2: Soil Hazard Categorisation Thresholds : Category B

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 316_04_11_S S_Primary_AL S	----	----	----	----
				Guideline	Guideline					
				Lower Limit	Upper Limit	16-Mar-2022 15:00	----	----	----	----
						EM2204587-018 MU				
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----
EG005(ED093T): Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	----	----	----	----	----	----
Cadmium	EG005T	1	mg/kg	----	----	----	----	----	----	----
Copper	EG005T	5	mg/kg	----	----	----	----	----	----	----
Lead	EG005T	5	mg/kg	----	----	----	----	----	----	----
Molybdenum	EG005T	5	mg/kg	----	----	----	----	----	----	----
Nickel	EG005T	5	mg/kg	----	----	----	----	----	----	----
Selenium	EG005T	5	mg/kg	----	----	----	----	----	----	----
Silver	EG005T	2	mg/kg	----	----	----	----	----	----	----
Zinc	EG005T	5	mg/kg	----	----	----	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----
EP074I: Volatile Halogenated Compounds										
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	----	----	----	----	----	----
Vinyl chloride	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	----	----	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons										

CHAIN OF CUSTODY DOCUMENTATION



CLIENT: Agon Environmental
 ADDRESS/OFFICE: Melbourne
 PROJECT MANAGER (PM): Craig Trimbur
 PROJECT ID: JC0927
 P.O. NO.:
 RESULTS REQUIRED (Date): 5 days

SAMPLER: Hannah - EP Risk & Brandon Clarke - Agon
 MOBILE 1: +61 400 826 907 (Craig Trimbur)
 MOBILE 2: +61 400 826 907 (Brandon Clarke)
 EMAIL REPORT TO: Labreports.TST@agonenviro.com.au
 EMAIL NVOICE TO: (if different to report) motherhublabresults1@wgtp.com.au

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FOR LABORATORY USE ONLY
 COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:
 Intact: Yes No N/A
 SAMPLE TEMPERATURE
 CHILLED: Yes No

ALS ID	SAMPLE INFORMATION (note: S = Soil, W=Water)			CONTAINER INFORMATION		
	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles
1	SX_OB_20220315_08_04_SS_Primary ALS	S	15.03.2022	8:04	Bucket	1
2	SX_OB_20220315_08_05_SS_Duplicate ALS	S	15.03.2022	8:04	Bucket	1
3	SX_OB_20220315_08_30_SR_Primary ALS	W	15.03.2022	8:30	Bottle	1
4	SX_OB_20220315_08_32_SB_Primary ALS	W	15.03.2022	8:32	Bottle	1
5	SX_OB_20220315_11_50_SS_Primary ALS	S	15.03.2022	11:50	Bucket	1
6	SX_OB_20220315_15_58_SS_Triplicate ALS	S	15.03.2022	15:58	Bucket	1
7	SX_OB_20220315_16_10_SS_Primary ALS	S	15.03.2022	16:10	Bucket	1
8	SX_OB_20220315_20_53_SS_Primary ALS	S	15.03.2022	20:53	Bucket	1
9	SX_OB_20220316_00_04_SS_Primary ALS	S	16.03.2022	0:04	Bucket	1
10	SX_OB_20220316_04_11_SS_Primary ALS	S	16.03.2022	4:11	Bucket	1

RELINQUISHED BY:		RECEIVED BY:	
Name: Einma	Date: 16.03.2022	Name: <i>Manic</i>	Date: 16/3
Of: EP Risk	Time:	Of: <i>mi</i>	Time: 12:20
Name:	Date:	Name:	Date:
Of:	Time:	Of:	Time:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; V = VOA Vial HCl Preserved; VS = VOA Vial Sulphuric Preserved; SG = Sulphuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bead for Acid Sulphate Soils; B = Unpreserved Bag.

Environmental Division
 Melbourne
 Work Order Reference
EM2204587



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