

# TBM Spoil Waste Categorisation Report

<b>TBM Spoil Waste Cat Report No:</b>	A04.0120220331100059_05	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	2
Approx. Source Tunnel Chainage From	202	Approx. Source Tunnel Chainage To	220
Approx. Rings From	86	Approx. Rings To	93
Foaming Agent	TamSoil 287AC	Water Source	Potable (City West Water)
For BSF Holding Bay No:	A04.01	Start of Filling From (Time / date)	17/03/2022
Tonnes Put in Holding Bay No:	7963.96	Finish of Filling (Time / Date)	18/03/2022
Classified Volume (LCM)	4000	Spoil Classification Decision	NPIW Containment
Sampling Ratio (samples per LCM)	1 : 166.67	Approx. Bank Cubic Meters (BCM)	3441.81

## 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_20220317_11_58_SS_Primary_EUF	SX_OB_20220318_00_02_SS_Primary_ALS	SX_OB_20220318_12_07_SS_Primary_EUF
SX_OB_20220317_12_04_SS_Primary_ALS	SX_OB_20220318_00_06_SS_Primary_EUF	SX_OB_20220318_12_11_SS_Primary_ALS
SX_OB_20220317_15_54_SS_Primary_ALS	SX_OB_20220318_03_55_SS_Primary_EUF	SX_OB_20220318_16_03_SS_Primary_EUF
SX_OB_20220317_16_02_SS_Duplicate_EUF	SX_OB_20220318_04_02_SS_Primary_ALS	SX_OB_20220318_16_04_SS_Duplicate_EUF
SX_OB_20220317_16_02_SS_Primary_EUF	SX_OB_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_16_06_SS_Triplicate_ALS
SX_OB_20220317_16_03_SS_Triplicate_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS	SX_OB_20220318_16_12_SS_Primary_ALS
SX_OB_20220317_19_50_SS_Primary_EUF	SX_OB_20220318_08_10_SS_Triplicate_EUF	SX_OB_20220318_20_01_SS_Primary_EUF
SX_OB_20220317_19_57_SS_Primary_ALS	SX_OB_20220318_08_15_SS_Primary_EUF	SX_OB_20220318_20_06_SS_Primary_ALS
Total Sample Numbers	24	Ratio Acceptable
Primary Sample Numbers	18	Yes
Classified Volume (LCM)	4000 m <sup>3</sup>	Ratio used for categorisation of spoil is 222.2 Primary samples to LCM. (see Section 4)
Volume: Sample Number Ratio (Samples per LCM)	1 : 166.67	

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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>	<b>Yes</b>
<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 &lt;75% of the containment criteria?</p> <p>If the answer is Yes, go to C. If the answer is No, go to D.</p>	<b>NA</b>
<p>C. If the answer to B is Yes, then was <b>testing</b> 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>	<b>NA</b>
<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>	<b>NA</b>
<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>	<b>Yes</b>
<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>	<b>No</b>

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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

<b>Need for IWRG 621.1 or 655.1 Testing</b>	
A. Is Spoil in this Holding Bay from a Zone of Exception or Anomalous and required testing for IWRG 621.1?	<b>Yes</b>
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?	<b>Yes</b>
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 ?	<b>No</b>
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) ?	<b>No</b>
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?	<b>No</b>
<b>Outcome from IWRG 621.1 testing (if needed)</b>	
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.	<b>No</b>
<b>Outcome from IWRG 655.1 testing (if needed)</b>	
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	<b>NA</b>
<b>Outcome from PFAS Testing</b>	
H. Do test results for PFAS (see Table 3.4-4 below) permit NPIW Containment as a spoil Classification Outcome?	<b>Yes</b>
<b><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></b>	
<b>Notes:</b>	
<ol style="list-style-type: none"> <li>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</li> </ol>	

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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 samples	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	24	18*	1: 222.2	18	21	39.72	43.32	51	20	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Nickel	mg/kg	5	24	18*	1: 222.2	18	79	166.3	185.4	230	60	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)

“\*” - Ratio used for categorisation of spoil is Primary samples to LCM due to spoil being from a zone of exception. (See section 4)

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

<b>IWRG 655.1 Test Results</b>											
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 samples	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	24	18	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFOA	ug/kg	5	24	18	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFHxS	ug/kg	5	24	18	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
ASLP (pH= 5) PFAS Concentrations											
PFOA	ug/L	0.01	24	18	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS+PFHxS	ug/L	0.01	24	18	0	N/A	N/A	N/A	<0.01	7	NPIW-Containment
ASLP (pH= 7) PFAS Concentrations											
PFOA	ug/L	0.01	24	18	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS+PFHxS	ug/L	0.01	24	18	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"> <li>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"> <li>a. <b>Arsenic</b> – <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"> <li>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.</li> </ol> <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> </li> <li>b. <b>Nickel</b> – <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"> <li>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).</li> <li>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).</li> <li>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.</li> <li>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.</li> </ol> </li> </ol> </li> </ol>

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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.
8.	Spoil is from a “Zone of Exception” therefore sampling ratio of Primary Samples only to LCM has been applied for spoil categorisation as per the SAQP revision 5. Sampling ratio in zones of exception is to be as per IWRG702 with 1 primary spoil sample categorising 250 m3 of spoil

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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





							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)
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
A04.01	SX_OB_20220318_16_12_SS_Primary_ALS	EM2204841015	18/03/2022	EM2204841	ALSE-Melbourne	Normal																				
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF	M22-Ma39779	18/03/2022	872697	MGT	Normal	40	<0.4	59	140	<1	<5	<0.1	<5	160	<2	<2	<10	100							
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF	M22-Ma39787	18/03/2022	872697	MGT	Normal																				
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF	M22-Ma39795	18/03/2022	872697	MGT	Normal																				
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS	EM2204841008	18/03/2022	EM2204841	ALSE-Melbourne	Normal	36	<1	38	77	<1.0	<5	<0.1	<5	115	<5	<2	<10	67	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS	EM2204841016	18/03/2022	EM2204841	ALSE-Melbourne	Normal																				



		PAH														BTEX						TRH						TPH							
		Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a) pyrene	Benzo(b+j)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	+C10-C36 (Sum of total)	Aldrin
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
A04.01	SX_OB_20220318_16_12_SS_Primary_ALS																																		
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF	1.2	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	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF																																		
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF																																		
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS	1.2	0.6	<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	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS																																		



		Organochlorine Pesticides																																			
		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	γ-BHC	γ-BHC (Lindane)	Methoxychlor	Toxaphene	Organochlorine pesticides EPA Vic	Other organochlorine pesticides EPA Vic	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol	4-chloro-3-methylphenol	Pentachlorophenol	2,3,4,5 & 2,3,4,6-Tetrachlorophenol		
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
A04.01	SX_OB_20220318_16_12_SS_Primary_ALS																																				
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF	<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	<0.5	<0.1	<0.1	<0.5	<0.5	<1	<1	<0.5	<1	<1			
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF																																				
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF																																				
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS	<0.05	<0.30	<0.05	<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	<1.00	<0.50	<1.00	<1.0	<0.05		
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS																																				



		Phenols															10:2 Fluorotelomer sulfonic acid (10:2 FTS)		8:2 Fluorotelomer sulfonic acid (8:2 FTS)		6:2 Fluorotelomer sulfonic acid (6:2 FTS)		4:2 Fluorotelomer sulfonic acid (4:2 FTS)		N-Ethyl perfluorooctane sulfonamide (NEFOSA)		N-ethyl-perfluorooctanesulfonamid oacetic acid (NEFOSAA)						
		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	3,6,4-Methylphenol (m&p-cresol)	4-Nitrophenol	Dinoseb	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg			
A04.01	SX_OB_20220318_16_12_SS_Primary_ALS																		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF	<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		<0.005		<0.005		<0.005		<0.005		<0.01
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF																		<0.00001		<0.00001		<0.00005		<0.00001		<0.00005		<0.00005		<0.00005		<0.00005
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF																		<0.00001		<0.00001		<0.00005		<0.00001		<0.00005		<0.00005		<0.00005		<0.00005
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS	<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	<0.0050	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS																		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005





PFOS/PFOA

		N-ethylperfluorooctanesulfonamidoethanol (NEFOSE)		N-Methyl perfluorooctane sulfonamide (NMeFOSA)		N-methylperfluorooctane sulfonamidoacetic acid (NMeFOAAA)		N-Methylperfluorooctanesulfonamidoethanol (NMeFOSE)		Perfluorobutanoic acid (PFBA)		Perfluorobutane sulfonic acid (PFBS)		Perfluorodecanoic acid (PFDA)		Perfluorododecanoic acid (PFDDA)		Perfluorodecanesulfonic acid (PFDS)		Perfluorooheptanoic acid (PFHpA)		Perfluorooheptane sulfonic acid (PFHpS)		Perfluorohexanoic acid (PFHxA)		Perfluorononanoic acid		
		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	mg/kg	mg/L
A04.01	SX_OB_20220318_16_12_SS_Primary_ALS	<0.00005		<0.00005		<0.00005		<0.00005		<0.0001		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF		<0.005		<0.005		<0.01		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005	
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF	<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF	<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS	<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	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS	<0.00005		<0.00005		<0.00005		<0.00005		<0.0001		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002



		PFNA		Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonamide (PFOSA)	Perfluoropentanoic acid (PFPeA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorooctanesulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS		Sum of US EPA PFAS (PFOS)	
		mg/kg	mg/L											mg/L	mg/kg		
A04.01	SX_OB_20220318_16_12_SS_Primary_ALS			<0.00001	<0.00005	<0.00002	<0.00002	<0.00001	<0.00005	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
A04.01	SX_OB_20220318_20_01_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	<0.005	
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF		<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF		<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS	<0.0050		<0.00001	<0.0050	<0.00005	<0.00002	<0.0050	<0.00005	<0.00002	<0.0050	<0.00001	<0.0050	<0.00001	<0.0050	<0.00001	<0.0050
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS			<0.00001	<0.00005	<0.00002	<0.00002		<0.00005	<0.00002		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	



		Chlorinated Hydrocarbons																														
+ PFUAF	Sum of enHealth PFAS (PFHS + PFOS + PFOA)*	Sum of PFAS	Sum of PFAS	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	1,1,1,2-tetrachloroethane	Bromodichloromethane	1,1,1-trichloroethane	Chloroform	1,1,1,2-tetrachloroethane	Chloromethane	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Other chlorinated hydrocarbons EPA Vic	Trichloroethene	Chlorinated hydrocarbons EPA Vic	cis-1,2-dichloroethene	1,1,2-trichloroethane	trans-1,3-dichloropropene	Vinyl chloride	Bromoform	Carbon tetrachloride	Chlorodibromomethane		
																															mg/kg	mg/L
A04.01	SX_OB_20220318_16_12_SS_Primary_ALS			<0.00010																												
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF	<0.005		<0.005		<0.05	<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	<0.5	<0.5	<0.5
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF		<0.00001		<0.0001																											
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF		<0.00001		<0.0001																											
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS			<0.00010		<0.0500		<0.50		<0.50		<0.50		<0.50	<0.50					<0.5	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50			<0.50		
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS			<0.00010																												



		Chloroethane			NA		PCBs							Inorganics							Halogenated Benzenes							Halogenated Hydrocarbons												
		mg/kg	mg/kg	mg/kg	UG/KG	µg/L	%	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1221	Arochlor 1260	Arochlor 1016	PCBs (Sum of total)	pH (after HCL)	pH (Final)	pH (Initial)	pH of Leaching Fluid	pH (aqueous extract)	Fluoride	Moisture Content (dried @ 103°C)	Cyanide Total	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 EPAVIC			
A04.01	SX_OB_20220318_16_12_SS_Primary_ALS				<10	<0.05																																		
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF	<0.5	<0.5	<0.5	<10		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					9.6	<100	33	<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			
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF				<0.05																																			
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF				<0.05																																			
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS		<0.50	<0.50	<10.0	<0.05	34.2							<0.1	1.9	5.1	9.7	5.0		100		<5	<0.50	<0.50		<0.50		<0.50										<0.5		
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS				<0.05																																			



	MAH				Solvents					SPOCAS
	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	-
EQL	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										
EPA Victoria IWRG621 PIW Category C Leached Upper Limits										
EPA Victoria IWRG621 PIW Category C Upper Limits										
EPA Victoria IWRG621 NPIW Upper Limits										

Location Code	Field ID	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl ketone	pH (CaCl2)
A04.01	SX_OB_20220317_11_58_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
A04.01	SX_OB_20220317_11_58_SS_Primary_EUF										
A04.01	SX_OB_20220317_11_58_SS_Primary_EUF										
A04.01	SX_OB_20220317_12_04_SS_Primary_ALS		<0.5								8.7
A04.01	SX_OB_20220317_12_04_SS_Primary_ALS										
A04.01	SX_OB_20220317_15_54_SS_Primary_ALS		<0.5								8.8
A04.01	SX_OB_20220317_15_54_SS_Primary_ALS										
A04.01	SX_OB_20220317_16_02_SS_Duplicate_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
A04.01	SX_OB_20220317_16_02_SS_Duplicate_EUF										
A04.01	SX_OB_20220317_16_02_SS_Duplicate_EUF										
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF										
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF										
A04.01	SX_OB_20220317_16_03_SS_Triplicate_ALS		<0.5								8.7
A04.01	SX_OB_20220317_16_03_SS_Triplicate_ALS										
A04.01	SX_OB_20220317_19_50_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
A04.01	SX_OB_20220317_19_50_SS_Primary_EUF										
A04.01	SX_OB_20220317_19_50_SS_Primary_EUF										
A04.01	SX_OB_20220317_19_57_SS_Primary_ALS		<0.5								8.8
A04.01	SX_OB_20220317_19_57_SS_Primary_ALS										
A04.01	SX_OB_20220318_00_02_SS_Primary_ALS		<0.5								8.9
A04.01	SX_OB_20220318_00_02_SS_Primary_ALS										
A04.01	SX_OB_20220318_00_06_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
A04.01	SX_OB_20220318_00_06_SS_Primary_EUF										
A04.01	SX_OB_20220318_00_06_SS_Primary_EUF										
A04.01	SX_OB_20220318_03_55_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
A04.01	SX_OB_20220318_03_55_SS_Primary_EUF										
A04.01	SX_OB_20220318_03_55_SS_Primary_EUF										
A04.01	SX_OB_20220318_04_02_SS_Primary_ALS		<0.5								8.8
A04.01	SX_OB_20220318_04_02_SS_Primary_ALS										
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS		<0.5								8.9
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS										
A04.01	SX_OB_20220318_08_09_SS_Duplicate_ALS		<0.5								8.9
A04.01	SX_OB_20220318_08_09_SS_Duplicate_ALS										
A04.01	SX_OB_20220318_08_10_SS_Triplicate_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
A04.01	SX_OB_20220318_08_10_SS_Triplicate_EUF										
A04.01	SX_OB_20220318_08_10_SS_Triplicate_EUF										
A04.01	SX_OB_20220318_08_15_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
A04.01	SX_OB_20220318_08_15_SS_Primary_EUF										
A04.01	SX_OB_20220318_08_15_SS_Primary_EUF										
A04.01	SX_OB_20220318_12_07_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
A04.01	SX_OB_20220318_12_07_SS_Primary_EUF										
A04.01	SX_OB_20220318_12_07_SS_Primary_EUF										
A04.01	SX_OB_20220318_12_11_SS_Primary_ALS		<0.5								9.0
A04.01	SX_OB_20220318_12_11_SS_Primary_ALS										
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF										
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF										
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF										
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF										
A04.01	SX_OB_20220318_16_06_SS_Triplicate_ALS		<0.5								9.2
A04.01	SX_OB_20220318_16_06_SS_Triplicate_ALS										
A04.01	SX_OB_20220318_16_12_SS_Primary_ALS		<0.5								8.9

		MAH				Solvents					SPOCAS
		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	-
A04.01	SX_OB_20220318_16_12_SS_Primary_ALS										
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF										
A04.01	SX_OB_20220318_20_01_SS_Primary_EUF										
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS		<0.5								9.0
A04.01	SX_OB_20220318_20_06_SS_Primary_ALS										

							Metals																						
Location Code	Field ID	Date	Lab Report Number	Lab Name	Sample Type	Parent Sample	Arsenic	Cadmium	Copper	Chromium (III+VI)	Chromium (hexavalent)	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	PAHs (Vic EPA List)	Benzo(b+JK)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(e)pyrene TEQ calc (Zero)			
EQL							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF	17/03/2022	872310	MGT	Normal		37	<0.4	61	120	<1	<5	<0.1	<5	200	<2	<2	<10	130			<0.5	<0.5	<0.5	<0.5	<0.5			
A04.01	SX_OB_20220317_16_02_SS_Duplicate_EUF	17/03/2022	872310	MGT	Field_D	M22-Ma36471	42	<0.4	68	120	<1	<5	<0.1	<5	230	<2	<2	<10	140			<0.5	<0.5	<0.5	<0.5	<0.5			
RPD							13	0	11	0	0	0	0	0	14	0	0	0	7			0	0	0	0	0	0		
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF	17/03/2022	872310	MGT	Normal		37	<0.4	61	120	<1	<5	<0.1	<5	200	<2	<2	<10	130			<0.5	<0.5	<0.5	<0.5	<0.5			
A04.01	SX_OB_20220317_16_03_SS_Triplicate_ALS	17/03/2022	EM2204843	ALSE-Melbourne	Interlab_D	M22-Ma36471	28	<1	38	66	<1.0	<5	<0.1	<5	119	<5	<2	<10	74	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5			
RPD							28	0	46	58	0	0	0	0	51	0	0	0	55			0	0	0	0	0	0	0	
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF	17/03/2022	872310	MGT	Normal																								
A04.01	SX_OB_20220317_16_02_SS_Duplicate_EUF	17/03/2022	872310	MGT	Field_D	M22-Ma36481																							
RPD																													
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF	17/03/2022	872310	MGT	Normal																								
A04.01	SX_OB_20220317_16_02_SS_Duplicate_EUF	17/03/2022	872310	MGT	Field_D	M22-Ma36489																							
RPD																													
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF	17/03/2022	872310	MGT	Normal																								
A04.01	SX_OB_20220317_16_03_SS_Triplicate_ALS	17/03/2022	EM2204843	ALSE-Melbourne	Interlab_D	M22-Ma36489																							
RPD																													
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF	18/03/2022	872697	MGT	Normal		43	<0.4	60	140	<1	6.1	<0.1	<5	170	<2	<2	<10	120			<0.5	<0.5	<0.5	<0.5	<0.5			
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF	18/03/2022	872697	MGT	Field_D	M22-Ma39775	42	<0.4	61	140	<1	5.4	<0.1	<5	170	<2	<2	<10	120			<0.5	<0.5	<0.5	<0.5	<0.5			
RPD							2	0	2	0	0	12	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF	18/03/2022	872697	MGT	Normal		43	<0.4	60	140	<1	6.1	<0.1	<5	170	<2	<2	<10	120			<0.5	<0.5	<0.5	<0.5	<0.5			
A04.01	SX_OB_20220318_16_06_SS_Triplicate_ALS	18/03/2022	EM2204841	ALSE-Melbourne	Interlab_D	M22-Ma39775	42	<1	68	95	<1.0	<5	<0.1	<5	141	<5	<2	<10	98	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5			
RPD							2	0	12	38	0	20	0	0	19	0	0	0	20			0	0	0	0	0	0	0	0
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF	18/03/2022	872697	MGT	Normal																								
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF	18/03/2022	872697	MGT	Field_D	M22-Ma39785																							
RPD																													
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF	18/03/2022	872697	MGT	Normal																								
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF	18/03/2022	872697	MGT	Field_D	M22-Ma39793																							
RPD																													
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF	18/03/2022	872697	MGT	Normal																								
A04.01	SX_OB_20220318_16_06_SS_Triplicate_ALS	18/03/2022	EM2204841	ALSE-Melbourne	Interlab_D	M22-Ma39793																							
RPD																													
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS	18/03/2022	EM2204841	ALSE-Melbourne	Normal		42	<1	56	88	<1.0	<5	<0.1	<5	169	<5	<2	<10	98	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5			
A04.01	SX_OB_20220318_08_09_SS_Duplicate_ALS	18/03/2022	EM2204841	ALSE-Melbourne	Field_D	EM2204841001	43	<1	61	99	<1.0	<5	<0.1	<5	171	<5	<2	<10	102	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5			
RPD							2	0	9	12	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS	18/03/2022	EM2204841	ALSE-Melbourne	Normal		42	<1	56	88	<1.0	<5	<0.1	<5	169	<5	<2	<10	98	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5			
A04.01	SX_OB_20220318_08_10_SS_Triplicate_EUF	18/03/2022	872697	MGT	Interlab_D	EM2204841001	<2	<0.4	<5	<5	<1	<5	<0.1	<5	<5	<2	<2	<10	<5			<0.5	<0.5	<0.5	<0.5	<0.5			
RPD							182	0	167	178	0	0	0	0	189	0	0	0	181			0	0	0	0	0	0	0	
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS	18/03/2022	EM2204841	ALSE-Melbourne	Normal		42	<1	56	88	<1.0	<5	<0.1	<5	169	<5	<2	<10	98	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5			
A04.01	SX_OB_20220318_08_10_SS_Triplicate_EUF	18/03/2022	872697	MGT	Interlab_D	EM2204841001																							
RPD																													
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS	18/03/2022	EM2204841	ALSE-Melbourne	Normal																								
A04.01	SX_OB_20220318_08_09_SS_Duplicate_ALS	18/03/2022	EM2204841	ALSE-Melbourne	Field_D	EM2204841011																							
RPD																													
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS	18/03/2022	EM2204841	ALSE-Melbourne	Normal																								
A04.01	SX_OB_20220318_08_10_SS_Triplicate_EUF	18/03/2022	872697	MGT	Interlab_D	EM2204841011																							
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						Other				
	Benzo(a)pyrene TEQ (LOR)	Benzo(e)pyrene TEQ calc (Half)	Benzo(a)pyrene	Benzo(b+g)fluoranthene	Benzo(k,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
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
0.5	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	0.1	0.1	0.1	0.2	0.3	20	20	50	50	100	100	50	20	20	

Location Code	Field ID	PAH														BTEX					TRH						Other			
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	
A04.01	SX_OB_20220317_16_02_SS_Duplicate_EUF	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	
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
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	
A04.01	SX_OB_20220317_16_03_SS_Triplicate_ALS	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<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
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF																													
A04.01	SX_OB_20220317_16_02_SS_Duplicate_EUF																													
RPD																														
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF																													
A04.01	SX_OB_20220317_16_03_SS_Triplicate_ALS																													
RPD																														
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	
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
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	
A04.01	SX_OB_20220318_16_06_SS_Triplicate_ALS	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<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
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																													
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF																													
RPD																														
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																													
A04.01	SX_OB_20220318_16_06_SS_Triplicate_ALS																													
RPD																														
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	
A04.01	SX_OB_20220318_08_09_SS_Duplicate_ALS	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<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
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	
A04.01	SX_OB_20220318_08_10_SS_Triplicate_EUF	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	
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
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	
A04.01	SX_OB_20220318_08_10_SS_Triplicate_EUF																													
RPD																														
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																													
A04.01	SX_OB_20220318_08_09_SS_Duplicate_ALS																													
RPD																														
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																													
A04.01	SX_OB_20220318_08_10_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)  
 \*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between labo

TPH		Organochlorine Pesticides																											
C15-C28	C29-C36	+C10-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
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	50	50	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	0.03	0.03	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5	0.1	0.03
Location Code	Field ID																												
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF																												
A04.01	SX_OB_20220317_16_02_SS_Duplicate_EUF																												
RPD																													
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF																												
A04.01	SX_OB_20220317_16_03_SS_Triplicate_ALS																												
RPD																													
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF																												
A04.01	SX_OB_20220317_16_02_SS_Duplicate_EUF																												
RPD																													
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF																												
A04.01	SX_OB_20220317_16_03_SS_Triplicate_ALS																												
RPD																													
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																												
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF																												
RPD																													
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																												
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF																												
RPD																													
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																												
A04.01	SX_OB_20220318_16_06_SS_Triplicate_ALS																												
RPD																													
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																												
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF																												
RPD																													
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																												
A04.01	SX_OB_20220318_16_06_SS_Triplicate_ALS																												
RPD																													
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																												
A04.01	SX_OB_20220318_08_09_SS_Duplicate_ALS																												
RPD																													
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																												
A04.01	SX_OB_20220318_08_10_SS_Triplicate_EUF																												
RPD																													
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																												
A04.01	SX_OB_20220318_08_10_SS_Triplicate_EUF																												
RPD																													
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																												
A04.01	SX_OB_20220318_08_09_SS_Duplicate_ALS																												
RPD																													
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																												
A04.01	SX_OB_20220318_08_10_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)  
 \*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between labo

EQL	Phenols																							10:2 Fluorotoluene sulfonic acid (10:2 FTS)				8:2 Fluorotoluene sulfonic acid (8:2 FTS)			
	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	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)	mg/L	mg/kg	mg/L	mg/kg		
	0.5	0.5	1	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		
Location Code	Field ID																														
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF																														
A04.01	SX_OB_20220317_16_02_SS_Duplicate_EUF																														
RPD																															
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF																														
A04.01	SX_OB_20220317_16_03_SS_Triplicate_ALS																														
RPD																															
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF																														
A04.01	SX_OB_20220317_16_02_SS_Duplicate_EUF																														
RPD																															
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF																														
A04.01	SX_OB_20220317_16_03_SS_Triplicate_ALS																														
RPD																															
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																														
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF																														
RPD																															
A04.01	SX_OB_20220318_16_02_SS_Primary_EUF																														
A04.01	SX_OB_20220318_16_02_SS_Duplicate_EUF																														
RPD																															
A04.01	SX_OB_20220318_16_02_SS_Primary_EUF																														
A04.01	SX_OB_20220318_16_03_SS_Triplicate_ALS																														
RPD																															
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																														
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF																														
RPD																															
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																														
A04.01	SX_OB_20220318_16_06_SS_Triplicate_ALS																														
RPD																															
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																														
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF																														
RPD																															
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																														
A04.01	SX_OB_20220318_16_06_SS_Triplicate_ALS																														
RPD																															
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																														
A04.01	SX_OB_20220318_08_09_SS_Duplicate_ALS																														
RPD																															
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																														
A04.01	SX_OB_20220318_08_10_SS_Triplicate_EUF																														
RPD																															
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																														
A04.01	SX_OB_20220318_08_10_SS_Triplicate_EUF																														
RPD																															
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																														
A04.01	SX_OB_20220318_08_09_SS_Duplicate_ALS																														
RPD																															
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																														
A04.01	SX_OB_20220318_08_10_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  
 \*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between labo











ics	Fluoride			Halogenated Benzenes							Halogenated Hydrocarbons					MAH					Solvents					SPOCAS		
	mg/kg	Moisture Content (dried @ 103°C)	Cyanide Total	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 EPA/Vic	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	mg/kg	mg/kg
EQL	100	1	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	0.5	0.1	
<b>Location Code</b>	<b>Field ID</b>																											
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF																											
A04.01	SX_OB_20220317_16_02_SS_Duplicate_EUF																											
RPD																												
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF																											
A04.01	SX_OB_20220317_16_03_SS_Triplicate_ALS																											
RPD																												
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF																											
A04.01	SX_OB_20220317_16_02_SS_Duplicate_EUF																											
RPD																												
A04.01	SX_OB_20220317_16_02_SS_Primary_EUF																											
A04.01	SX_OB_20220317_16_03_SS_Triplicate_ALS																											
RPD																												
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																											
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF																											
RPD																												
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																											
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF																											
RPD																												
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																											
A04.01	SX_OB_20220318_16_06_SS_Triplicate_ALS																											
RPD																												
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																											
A04.01	SX_OB_20220318_16_04_SS_Duplicate_EUF																											
RPD																												
A04.01	SX_OB_20220318_16_03_SS_Primary_EUF																											
A04.01	SX_OB_20220318_16_06_SS_Triplicate_ALS																											
RPD																												
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																											
A04.01	SX_OB_20220318_08_09_SS_Duplicate_ALS																											
RPD																												
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																											
A04.01	SX_OB_20220318_08_10_SS_Triplicate_EUF																											
RPD																												
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																											
A04.01	SX_OB_20220318_08_10_SS_Triplicate_EUF																											
RPD																												
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																											
A04.01	SX_OB_20220318_08_09_SS_Duplicate_ALS																											
RPD																												
A04.01	SX_OB_20220318_08_08_SS_Primary_ALS																											
A04.01	SX_OB_20220318_08_10_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)  
 \*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between labo

# TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	A04.0120220331100059_05	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	<b>UCL Statistics for Uncensored Full Data Sets</b>											
2												
3	User Selected Options											
4	Date/Time of Computation		ProUCL 5.130/03/2022 1:46:27 PM									
5	From File		WorkSheet_b.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10												
11	<b>Arsenic</b>											
12												
13	<b>General Statistics</b>											
14	Total Number of Observations				18		Number of Distinct Observations				14	
15							Number of Missing Observations				0	
16	Minimum				21		Mean				39.72	
17	Maximum				51		Median				42.5	
18	SD				8.777		Std. Error of Mean				2.069	
19	Coefficient of Variation				0.221		Skewness				-1.26	
20												
21	<b>Normal GOF Test</b>											
22	Shapiro Wilk Test Statistic				0.825		<b>Shapiro Wilk GOF Test</b>					
23	5% Shapiro Wilk Critical Value				0.897		Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic				0.235		<b>Lilliefors GOF Test</b>					
25	5% Lilliefors Critical Value				0.202		Data Not Normal at 5% Significance Level					
26	<b>Data Not Normal at 5% Significance Level</b>											
27												
28	<b>Assuming Normal Distribution</b>											
29	<b>95% Normal UCL</b>						<b>95% UCLs (Adjusted for Skewness)</b>					
30	95% Student's-t UCL				43.32		95% Adjusted-CLT UCL (Chen-1995)				42.47	
31							95% Modified-t UCL (Johnson-1978)				43.22	
32												
33	<b>Gamma GOF Test</b>											
34	A-D Test Statistic				1.816		<b>Anderson-Darling Gamma GOF Test</b>					
35	5% A-D Critical Value				0.739		Data Not Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic				0.266		<b>Kolmogorov-Smirnov Gamma GOF Test</b>					
37	5% K-S Critical Value				0.203		Data Not Gamma Distributed at 5% Significance Level					
38	<b>Data Not Gamma Distributed at 5% Significance Level</b>											
39												
40	<b>Gamma Statistics</b>											
41	k hat (MLE)				17.12		k star (bias corrected MLE)				14.31	
42	Theta hat (MLE)				2.32		Theta star (bias corrected MLE)				2.777	
43	nu hat (MLE)				616.4		nu star (bias corrected)				515	
44	MLE Mean (bias corrected)				39.72		MLE Sd (bias corrected)				10.5	
45							Approximate Chi Square Value (0.05)				463.4	
46	Adjusted Level of Significance				0.0357		Adjusted Chi Square Value				458.7	
47												
48	<b>Assuming Gamma Distribution</b>											
49	95% Approximate Gamma UCL (use when n>=50))				44.15		95% Adjusted Gamma UCL (use when n<50)				44.6	
50												
51	<b>Lognormal GOF Test</b>											
52	Shapiro Wilk Test Statistic				0.752		<b>Shapiro Wilk Lognormal GOF Test</b>					
53	5% Shapiro Wilk Critical Value				0.897		Data Not Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic				0.277		<b>Lilliefors Lognormal GOF Test</b>					
55	5% Lilliefors Critical Value				0.202		Data Not Lognormal at 5% Significance Level					
56	<b>Data Not Lognormal at 5% Significance Level</b>											
57												
58	<b>Lognormal Statistics</b>											

	A	B	C	D	E	F	G	H	I	J	K	L
59	Minimum of Logged Data					3.045	Mean of logged Data					3.652
60	Maximum of Logged Data					3.932	SD of logged Data					0.266
61												
62	<b>Assuming Lognormal Distribution</b>											
63	95% H-UCL					44.97	90% Chebyshev (MVUE) UCL					47.46
64	95% Chebyshev (MVUE) UCL					50.9	97.5% Chebyshev (MVUE) UCL					55.67
65	99% Chebyshev (MVUE) UCL					65.03						
66												
67	<b>Nonparametric Distribution Free UCL Statistics</b>											
68	<b>Data do not follow a Discernible Distribution (0.05)</b>											
69												
70	<b>Nonparametric Distribution Free UCLs</b>											
71	95% CLT UCL					43.13	95% Jackknife UCL					43.32
72	95% Standard Bootstrap UCL					43.02	95% Bootstrap-t UCL					42.77
73	95% Hall's Bootstrap UCL					42.5	95% Percentile Bootstrap UCL					42.78
74	95% BCA Bootstrap UCL					42.33						
75	90% Chebyshev(Mean, Sd) UCL					45.93	95% Chebyshev(Mean, Sd) UCL					48.74
76	97.5% Chebyshev(Mean, Sd) UCL					52.64	99% Chebyshev(Mean, Sd) UCL					60.31
77												
78	<b>Suggested UCL to Use</b>											
79	95% Student's-t UCL					43.32	or 95% Modified-t UCL					43.22
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	<b>Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be</b>											
87	<b>reliable. Chen's and Johnson's methods provide adjustments for positively skewed data sets.</b>											
88												
89												
90	<b>Nickel</b>											
91												
92	<b>General Statistics</b>											
93	Total Number of Observations					18	Number of Distinct Observations					16
94							Number of Missing Observations					0
95	Minimum					79	Mean					166.3
96	Maximum					230	Median					170.5
97	SD					46.47	Std. Error of Mean					10.95
98	Coefficient of Variation					0.279	Skewness					-0.414
99												
100	<b>Normal GOF Test</b>											
101	Shapiro Wilk Test Statistic					0.952	<b>Shapiro Wilk GOF Test</b>					
102	5% Shapiro Wilk Critical Value					0.897	Data appear Normal at 5% Significance Level					
103	Lilliefors Test Statistic					0.104	<b>Lilliefors GOF Test</b>					
104	5% Lilliefors Critical Value					0.202	Data appear Normal at 5% Significance Level					
105	<b>Data appear Normal at 5% Significance Level</b>											
106												
107	<b>Assuming Normal Distribution</b>											
108	<b>95% Normal UCL</b>						<b>95% UCLs (Adjusted for Skewness)</b>					
109	95% Student's-t UCL					185.4	95% Adjusted-CLT UCL (Chen-1995)					183.2
110							95% Modified-t UCL (Johnson-1978)					185.2
111												
112	<b>Gamma GOF Test</b>											
113	A-D Test Statistic					0.433	<b>Anderson-Darling Gamma GOF Test</b>					
114	5% A-D Critical Value					0.739	Detected data appear Gamma Distributed at 5% Significance Level					
115	K-S Test Statistic					0.124	<b>Kolmogorov-Smirnov Gamma GOF Test</b>					
116	5% K-S Critical Value					0.203	Detected data appear Gamma Distributed at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L
117	<b>Detected data appear Gamma Distributed at 5% Significance Level</b>											
118												
119	<b>Gamma Statistics</b>											
120	k hat (MLE)				11.61		k star (bias corrected MLE)				9.714	
121	Theta hat (MLE)				14.32		Theta star (bias corrected MLE)				17.12	
122	nu hat (MLE)				418		nu star (bias corrected)				349.7	
123	MLE Mean (bias corrected)				166.3		MLE Sd (bias corrected)				53.37	
124							Approximate Chi Square Value (0.05)			307.4		
125	Adjusted Level of Significance				0.0357		Adjusted Chi Square Value				303.5	
126												
127	<b>Assuming Gamma Distribution</b>											
128	95% Approximate Gamma UCL (use when n>=50))				189.2		95% Adjusted Gamma UCL (use when n<50)				191.6	
129												
130	<b>Lognormal GOF Test</b>											
131	Shapiro Wilk Test Statistic				0.903		<b>Shapiro Wilk Lognormal GOF Test</b>					
132	5% Shapiro Wilk Critical Value				0.897		Data appear Lognormal at 5% Significance Level					
133	Lilliefors Test Statistic				0.141		<b>Lilliefors Lognormal GOF Test</b>					
134	5% Lilliefors Critical Value				0.202		Data appear Lognormal at 5% Significance Level					
135	<b>Data appear Lognormal at 5% Significance Level</b>											
136												
137	<b>Lognormal Statistics</b>											
138	Minimum of Logged Data				4.369		Mean of logged Data				5.07	
139	Maximum of Logged Data				5.438		SD of logged Data				0.319	
140												
141	<b>Assuming Lognormal Distribution</b>											
142	95% H-UCL				193.6		90% Chebyshev (MVUE) UCL				205.3	
143	95% Chebyshev (MVUE) UCL				222.6		97.5% Chebyshev (MVUE) UCL				246.7	
144	99% Chebyshev (MVUE) UCL				293.9							
145												
146	<b>Nonparametric Distribution Free UCL Statistics</b>											
147	<b>Data appear to follow a Discernible Distribution at 5% Significance Level</b>											
148												
149	<b>Nonparametric Distribution Free UCLs</b>											
150	95% CLT UCL				184.4		95% Jackknife UCL				185.4	
151	95% Standard Bootstrap UCL				183.5		95% Bootstrap-t UCL				184	
152	95% Hall's Bootstrap UCL				183.6		95% Percentile Bootstrap UCL				183.9	
153	95% BCA Bootstrap UCL				183.2							
154	90% Chebyshev(Mean, Sd) UCL				199.2		95% Chebyshev(Mean, Sd) UCL				214.1	
155	97.5% Chebyshev(Mean, Sd) UCL				234.7		99% Chebyshev(Mean, Sd) UCL				275.3	
156												
157	<b>Suggested UCL to Use</b>											
158	95% Student's-t UCL				185.4							
159												
160	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
161	Recommendations are based upon data size, data distribution, and skewness.											
162	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
163	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
164												
165	<b>Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be</b>											
166	<b>reliable. Chen's and Johnson's methods provide adjustments for positively skewed data sets.</b>											
167												

# TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	A04.0120220331100059_05	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



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 **872697-S**  
Project name **20220319045141-Eurofin-12**  
Project ID **JC0927**  
Received Date **Mar 19, 2022**

Client Sample ID			SX_OB_20220 318_08_10_SS _TriPLICATE_EU F	SX_OB_20220 318_08_15_SS _Primary_EUF	SX_OB_20220 318_12_07_SS _Primary_EUF	SX_OB_20220 318_16_03_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma39772	M22-Ma39773	M22-Ma39774	M22-Ma39775
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
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 <sup>N02</sup>	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) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	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
<b>Volatile Organics</b>						
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
<b>Volatile Organics</b>						
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

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma39772	M22-Ma39773	M22-Ma39774	M22-Ma39775
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Volatile Organics</b>						
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
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	%	75	113	64	101
Toluene-d8 (surr.)	1	%	73	113	69	67
<b>Polycyclic Aromatic Hydrocarbons</b>						
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

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma39772	M22-Ma39773	M22-Ma39774	M22-Ma39775
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Polycyclic Aromatic Hydrocarbons</b>						
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
Benzo(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 <sup>N07</sup>	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	%	81	91	75	77
p-Terphenyl-d14 (surr.)	1	%	95	87	76	96
<b>Organochlorine Pesticides</b>						
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	%	110	98	74	95
Tetrachloro-m-xylene (surr.)	1	%	125	119	107	119

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma39772	M22-Ma39773	M22-Ma39774	M22-Ma39775
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Polychlorinated Biphenyls</b>						
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
Dibutylchlorendate (surr.)	1	%	110	98	74	95
Tetrachloro-m-xylene (surr.)	1	%	125	119	107	119
<b>Phenols (Halogenated)</b>						
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
<b>Phenols (non-Halogenated)</b>						
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	%	69	69	58	66
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
<b>Chromium (hexavalent)</b>						
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
Fluoride (Total)	100	mg/kg	< 100	< 100	< 100	< 100
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	9.8	9.9	9.6	9.8
% Moisture	1	%	27	29	28	35
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	< 2	51	44	43
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	120	120	140
Copper	5	mg/kg	< 5	65	58	60
Lead	5	mg/kg	< 5	< 5	< 5	6.1
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma39772	M22-Ma39773	M22-Ma39774	M22-Ma39775
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	210	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	< 5	140	110	120
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	82	94	134	106
13C5-PFPeA (surr.)	1	%	78	98	140	119
13C5-PFHxA (surr.)	1	%	79	103	143	115
13C4-PFHpA (surr.)	1	%	88	96	136	111
13C8-PFOA (surr.)	1	%	100	114	143	122
13C5-PFNA (surr.)	1	%	76	95	76	108
13C6-PFDA (surr.)	1	%	94	94	87	99
13C2-PFUnDA (surr.)	1	%	75	91	139	101
13C2-PFDoDA (surr.)	1	%	74	96	70	115
13C2-PFTeDA (surr.)	1	%	79	112	64	124
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	86	95	146	107
D3-N-MeFOSA (surr.)	1	%	76	102	104	114
D5-N-EtFOSA (surr.)	1	%	74	116	91	130
D7-N-MeFOSE (surr.)	1	%	77	97	137	100
D9-N-EtFOSE (surr.)	1	%	79	99	131	110
D5-N-EtFOSAA (surr.)	1	%	75	82	113	104
D3-N-MeFOSAA (surr.)	1	%	72	78	110	86

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<b>Sample Matrix</b>			Soil	Soil	Soil	Soil
<b>Eurofins Sample No.</b>			M22-Ma39772	M22-Ma39773	M22-Ma39774	M22-Ma39775
<b>Date Sampled</b>			Mar 18, 2022	Mar 18, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	81	107	124	112
18O2-PFHxS (surr.)	1	%	89	98	134	104
13C8-PFOS (surr.)	1	%	93	63	100	84
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	125	104	138	125
13C2-6:2 FTSA (surr.)	1	%	96	87	100	97
13C2-8:2 FTSA (surr.)	1	%	77	86	103	92
13C2-10:2 FTSA (surr.)	1	%	77	76	114	90
<b>PFASs Summations</b>						
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_OB_20220 318_16_04_SS _Duplicate_EU F	SX_OB_20220 318_20_01_SS _Primary_EUF	SX_OB_20220 319_00_09_SS _Primary_EUF	SX_OB_20220 319_04_03_SS _Primary_EUF
<b>Sample Matrix</b>			Soil	Soil	Soil	Soil
<b>Eurofins Sample No.</b>			M22-Ma39776	M22-Ma39779	M22-Ma39780	M22-Ma39781
<b>Date Sampled</b>			Mar 18, 2022	Mar 18, 2022	Mar 19, 2022	Mar 19, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
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 <sup>N02</sup>	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) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma39776	M22-Ma39779	M22-Ma39780	M22-Ma39781
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 19, 2022	Mar 19, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	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
<b>Volatile Organics</b>						
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
<b>Volatile Organics</b>						
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

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma39776	M22-Ma39779	M22-Ma39780	M22-Ma39781
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 19, 2022	Mar 19, 2022
Test/Reference	LOR	Unit				
<b>Volatile Organics</b>						
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	%	56	62	119	50
Toluene-d8 (surr.)	1	%	79	59	133	92
<b>Polycyclic Aromatic Hydrocarbons</b>						
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 <sup>N07</sup>	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	%	78	79	61	69
p-Terphenyl-d14 (surr.)	1	%	90	106	136	126



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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma39776	M22-Ma39779	M22-Ma39780	M22-Ma39781
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 19, 2022	Mar 19, 2022
Test/Reference	LOR	Unit				
<b>Organochlorine Pesticides</b>						
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
Dibutylchlorodate (surr.)	1	%	95	93	103	57
Tetrachloro-m-xylene (surr.)	1	%	119	123	66	54
<b>Polychlorinated Biphenyls</b>						
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
Dibutylchlorodate (surr.)	1	%	95	93	103	57
Tetrachloro-m-xylene (surr.)	1	%	119	123	66	54
<b>Phenols (Halogenated)</b>						
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

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma39776	M22-Ma39779	M22-Ma39780	M22-Ma39781
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 19, 2022	Mar 19, 2022
Test/Reference	LOR	Unit				
<b>Phenols (non-Halogenated)</b>						
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	%	68	44	44	43
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
<b>Chromium (hexavalent)</b>						
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
<b>Cyanide (total)</b>						
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
<b>Fluoride (Total)</b>						
Fluoride (Total)	100	mg/kg	< 100	< 100	< 100	< 100
<b>pH (1:5 Aqueous extract at 25°C as rec.)</b>						
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	10	9.6	9.4	9.3
<b>% Moisture</b>						
% Moisture	1	%	35	33	31	32
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	42	40	41	42
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	140	140	130	150
Copper	5	mg/kg	61	59	56	66
Lead	5	mg/kg	5.4	< 5	5.7	6.3
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	160	170	190
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	120	100	110	140
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	105	79	150	121
13C5-PFPeA (surr.)	1	%	115	83	76	123
13C5-PFHxA (surr.)	1	%	113	83	83	140

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma39776	M22-Ma39779	M22-Ma39780	M22-Ma39781
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 19, 2022	Mar 19, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
13C4-PFHpA (surr.)	1	%	107	82	79	128
13C8-PFOA (surr.)	1	%	121	83	80	123
13C5-PFNA (surr.)	1	%	108	92	86	146
13C6-PFDA (surr.)	1	%	95	123	92	72
13C2-PFUnDA (surr.)	1	%	104	82	82	123
13C2-PFDoDA (surr.)	1	%	110	76	73	145
13C2-PFTeDA (surr.)	1	%	122	121	147	111
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	106	87	78	132
D3-N-MeFOSA (surr.)	1	%	106	73	94	79
D5-N-EtFOSA (surr.)	1	%	114	91	76	69
D7-N-MeFOSE (surr.)	1	%	103	129	140	115
D9-N-EtFOSE (surr.)	1	%	105	127	149	113
D5-N-EtFOSAA (surr.)	1	%	99	118	118	108
D3-N-MeFOSAA (surr.)	1	%	97	122	128	109
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	117	140	150	123
18O2-PFHxS (surr.)	1	%	97	154	137	107
13C8-PFOS (surr.)	1	%	79	108	104	88
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	130	61	62	113
13C2-6:2 FTSA (surr.)	1	%	113	114	108	87

Client Sample ID			SX_OB_20220 318_16_04_SS _Duplicate_EU F	SX_OB_20220 318_20_01_SS _Primary_EUF	SX_OB_20220 319_00_09_SS _Primary_EUF	SX_OB_20220 319_04_03_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma39776	M22-Ma39779	M22-Ma39780	M22-Ma39781
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 19, 2022	Mar 19, 2022
Test/Reference	LOR	Unit				
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
13C2-8:2 FTSA (surr.)	1	%	87	118	116	72
13C2-10:2 FTSA (surr.)	1	%	108	139	129	99
<b>PFASs Summations</b>						
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 23, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Mar 23, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Mar 23, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	Mar 23, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	Mar 23, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 23, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	Mar 23, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	Mar 23, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 23, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 23, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	Mar 23, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	Mar 23, 2022	14 Days
Fluoride (Total) - Method: LTM-INO-4150 Determination of Total Fluoride PART B – ISE - Method: LTM-INO-4150 Determination of Total Fluoride PART A – CIC	Melbourne	Mar 23, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Mar 22, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	Mar 23, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Mar 21, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 23, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 23, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 23, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 23, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 21, 2022	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Mar 19, 2022 10:00 AM
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<b>Project Name:</b>	20220319045141-Eurofin-12	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	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_OB_20220318_08_10_S_S_Triplicate_EUF	Mar 18, 2022	8:10AM	Soil	M22-Ma39772		X	X	X
2	SX_OB_20220318_08_15_S_S_Primary_EUF	Mar 18, 2022	8:15AM	Soil	M22-Ma39773		X	X	X
3	SX_OB_20220318_12_07_S_S_Primary_EUF	Mar 18, 2022	12:07PM	Soil	M22-Ma39774		X	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
4	SX_OB_20220318_16_03_S_S_Primary_EU_F	Mar 18, 2022	4:03PM	Soil	M22-Ma39775		X	X	X
5	SX_OB_20220318_16_04_S_S_Duplicate_EUF	Mar 18, 2022	4:04PM	Soil	M22-Ma39776		X	X	X
6	SX_OB_20220318_16_26_S_R_Rinsate_EU_F	Mar 18, 2022	4:26PM	Water	M22-Ma39777			X	
7	SX_OB_20220318_16_27_S	Mar 18, 2022	4:27PM	Water	M22-Ma39778			X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	B_Blank_EUF								
8	SX_OB_20220318_20_01_S_S_Primary_EUF	Mar 18, 2022	8:01PM	Soil	M22-Ma39779		X	X	X
9	SX_OB_20220319_00_09_S_S_Primary_EUF	Mar 19, 2022	12:09AM	Soil	M22-Ma39780		X	X	X
10	SX_OB_20220319_04_03_S_S_Primary_EUF	Mar 19, 2022	4:03AM	Soil	M22-Ma39781		X	X	X
11	SX_OB_20220	Mar 18, 2022	8:10AM	AUS Leachate	M22-Ma39782	X		X	



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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFAS)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	318_08_10_S S_Triplicate_E UF			- pH 5.0					
12	SX_OB_20220 318_08_15_S S_Primary_EU F	Mar 18, 2022	8:15AM	AUS Leachate - pH 5.0	M22-Ma39783	X		X	
13	SX_OB_20220 318_12_07_S S_Primary_EU F	Mar 18, 2022	12:07PM	AUS Leachate - pH 5.0	M22-Ma39784	X		X	
14	SX_OB_20220 318_16_03_S S_Primary_EU	Mar 18, 2022	4:03PM	AUS Leachate - pH 5.0	M22-Ma39785	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	F								
15	SX_OB_20220318_16_04_S_S_Duplicate_EUF	Mar 18, 2022	4:04PM	AUS Leachate - pH 5.0	M22-Ma39786	X		X	
16	SX_OB_20220318_20_01_S_S_Primary_EUF	Mar 18, 2022	8:01PM	AUS Leachate - pH 5.0	M22-Ma39787	X		X	
17	SX_OB_20220319_00_09_S_S_Primary_EUF	Mar 19, 2022	12:09AM	AUS Leachate - pH 5.0	M22-Ma39788	X		X	
18	SX_OB_20220319_03_03_S_S_Primary_EUF	Mar 19, 2022	4:03AM	AUS Leachate	M22-Ma39789	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	319_04_03_S S_Primary_EU F			- pH 5.0					
19	SX_OB_20220 318_08_10_S S_Triplicate_E UF	Mar 18, 2022	8:10AM	AUS Leachate - Reagent Water	M22-Ma39790	X		X	
20	SX_OB_20220 318_08_15_S S_Primary_EU F	Mar 18, 2022	8:15AM	AUS Leachate - Reagent Water	M22-Ma39791	X		X	
21	SX_OB_20220 318_12_07_S S_Primary_EU	Mar 18, 2022	12:07PM	AUS Leachate - Reagent Water	M22-Ma39792	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	F								
22	SX_OB_20220318_16_03_S_S_Primary_EU_F	Mar 18, 2022	4:03PM	AUS Leachate - Reagent Water	M22-Ma39793	X		X	
23	SX_OB_20220318_16_04_S_S_Duplicate_EUF	Mar 18, 2022	4:04PM	AUS Leachate - Reagent Water	M22-Ma39794	X		X	
24	SX_OB_20220318_20_01_S_S_Primary_EU_F	Mar 18, 2022	8:01PM	AUS Leachate - Reagent Water	M22-Ma39795	X		X	
25	SX_OB_20220	Mar 19, 2022	12:09AM	AUS Leachate	M22-Ma39796	X		X	

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<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	319_00_09_S S_Primary_EU F			- Reagent Water					
26	SX_OB_20220 319_04_03_S S_Primary_EU F	Mar 19, 2022	4:03AM	AUS Leachate - Reagent Water	M22-Ma39797	X		X	
<b>Test Counts</b>						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

<b>mg/kg:</b> milligrams per kilogram	<b>mg/L:</b> milligrams per litre	<b>µg/L:</b> micrograms per litre
<b>ppm:</b> parts per million	<b>ppb:</b> parts per billion	<b>%:</b> Percentage
<b>org/100 mL:</b> Organisms per 100 millilitres	<b>NTU:</b> Nephelometric Turbidity Units	<b>MPN/100 mL:</b> Most Probable Number of organisms per 100 millilitres

### Terms

<b>APHA</b>	American Public Health Association
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	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.
<b>NCP</b>	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.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>TBTO</b>	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.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 5.4
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	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
<b>Method Blank</b>						
<b>Total Recoverable Hydrocarbons</b>						
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	
<b>Method Blank</b>						
<b>Volatile Organics</b>						
Hexachlorobutadiene	mg/kg	< 0.5		0.5	Pass	
<b>Method Blank</b>						
<b>Volatile Organics</b>						
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	
<b>Method Blank</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
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	
<b>Method Blank</b>							
<b>Organochlorine Pesticides</b>							
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	
<b>Method Blank</b>							
<b>Polychlorinated Biphenyls</b>							
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	
<b>Method Blank</b>							
<b>Phenols (Halogenated)</b>							
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	
<b>Method Blank</b>							
<b>Phenols (non-Halogenated)</b>							
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	
<b>Method Blank</b>							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Cyanide (total)	mg/kg	< 5			5	Pass	
Fluoride (Total)	mg/kg	< 100			100	Pass	
<b>Method Blank</b>							
<b>Heavy Metals</b>							
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	
<b>Method Blank</b>							
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>							
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	
<b>Method Blank</b>							
<b>Perfluoroalkyl sulfonamido substances</b>							
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	
<b>Method Blank</b>							
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>							
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	
<b>Method Blank</b>							
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>							
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	
<b>LCS - % Recovery</b>							
<b>Total Recoverable Hydrocarbons</b>							
TRH C6-C9	%	110			70-130	Pass	
TRH C10-C14	%	82			70-130	Pass	
Naphthalene	%	102			70-130	Pass	
TRH C6-C10	%	107			70-130	Pass	
TRH >C10-C16	%	83			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Volatile Organics</b>							
1.1-Dichloroethene	%	70			70-130	Pass	
1.1.1-Trichloroethane	%	89			70-130	Pass	
1.2-Dichlorobenzene	%	76			70-130	Pass	
1.2-Dichloroethane	%	122			70-130	Pass	
Benzene	%	105			70-130	Pass	
Ethylbenzene	%	83			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	71			70-130	Pass	
Toluene	%	74			70-130	Pass	
Trichloroethene	%	78			70-130	Pass	
Xylenes - Total*	%	78			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	%	99			70-130	Pass	
Acenaphthylene	%	103			70-130	Pass	
Anthracene	%	74			70-130	Pass	
Benz(a)anthracene	%	91			70-130	Pass	
Benzo(a)pyrene	%	90			70-130	Pass	
Benzo(b&i)fluoranthene	%	81			70-130	Pass	
Benzo(g,h,i)perylene	%	85			70-130	Pass	
Benzo(k)fluoranthene	%	76			70-130	Pass	
Chrysene	%	87			70-130	Pass	
Dibenz(a,h)anthracene	%	89			70-130	Pass	
Fluoranthene	%	82			70-130	Pass	
Fluorene	%	94			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	81			70-130	Pass	
Naphthalene	%	100			70-130	Pass	
Phenanthrene	%	85			70-130	Pass	
Pyrene	%	83			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Organochlorine Pesticides</b>							
Chlordanes - Total	%	92			70-130	Pass	
4,4'-DDD	%	85			70-130	Pass	
4,4'-DDE	%	85			70-130	Pass	
4,4'-DDT	%	75			70-130	Pass	
a-HCH	%	94			70-130	Pass	
Aldrin	%	80			70-130	Pass	
b-HCH	%	87			70-130	Pass	
d-HCH	%	92			70-130	Pass	
Dieldrin	%	87			70-130	Pass	
Endosulfan I	%	88			70-130	Pass	
Endosulfan II	%	76			70-130	Pass	
Endosulfan sulphate	%	103			70-130	Pass	
Endrin	%	96			70-130	Pass	
Endrin aldehyde	%	82			70-130	Pass	
Endrin ketone	%	75			70-130	Pass	
g-HCH (Lindane)	%	92			70-130	Pass	
Heptachlor	%	91			70-130	Pass	
Heptachlor epoxide	%	92			70-130	Pass	
Hexachlorobenzene	%	84			70-130	Pass	
Methoxychlor	%	80			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polychlorinated Biphenyls</b>							
Aroclor-1260	%	99			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Phenols (Halogenated)</b>							
2-Chlorophenol	%	72			25-140	Pass	
2,4-Dichlorophenol	%	70			25-140	Pass	
2,4,5-Trichlorophenol	%	55			25-140	Pass	
2,4,6-Trichlorophenol	%	72			25-140	Pass	
2,6-Dichlorophenol	%	67			25-140	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
4-Chloro-3-methylphenol	%	72		25-140	Pass	
Pentachlorophenol	%	62		25-140	Pass	
Tetrachlorophenols - Total	%	45		25-140	Pass	
<b>LCS - % Recovery</b>						
<b>Phenols (non-Halogenated)</b>						
2-Cyclohexyl-4,6-dinitrophenol	%	61		25-140	Pass	
2-Methyl-4,6-dinitrophenol	%	50		25-140	Pass	
2-Nitrophenol	%	69		25-140	Pass	
2,4-Dimethylphenol	%	81		25-140	Pass	
2,4-Dinitrophenol	%	92		25-140	Pass	
2-Methylphenol (o-Cresol)	%	66		25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	75		25-140	Pass	
4-Nitrophenol	%	59		25-140	Pass	
Dinoseb	%	54		25-140	Pass	
Phenol	%	69		25-140	Pass	
<b>LCS - % Recovery</b>						
Chromium (hexavalent)	%	101		70-130	Pass	
Cyanide (total)	%	83		70-130	Pass	
Fluoride (Total)	%	80		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Heavy Metals</b>						
Arsenic	%	99		80-120	Pass	
Cadmium	%	105		80-120	Pass	
Chromium	%	100		80-120	Pass	
Copper	%	101		80-120	Pass	
Lead	%	105		80-120	Pass	
Mercury	%	103		80-120	Pass	
Molybdenum	%	100		80-120	Pass	
Nickel	%	102		80-120	Pass	
Selenium	%	95		80-120	Pass	
Silver	%	102		80-120	Pass	
Tin	%	107		80-120	Pass	
Zinc	%	97		80-120	Pass	
<b>LCS - % Recovery</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA)	%	78		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	80		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	75		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	71		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	79		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	85		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	89		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	92		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	79		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	79		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	78		50-150	Pass	
<b>LCS - % Recovery</b>						
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA)	%	81		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	85		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	81		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	79		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	79		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	56		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	77			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	79			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	100			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	79			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	76			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	75			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	89			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	70			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	100			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	90			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)	%	79			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	82			50-150	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Total Recoverable Hydrocarbons</b>				Result 1				
TRH C10-C14	M22-Ma40538	NCP	%	94		70-130	Pass	
TRH >C10-C16	M22-Ma40538	NCP	%	96		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1				
Acenaphthene	M22-Ma39969	NCP	%	105		70-130	Pass	
Acenaphthylene	M22-Ma39969	NCP	%	102		70-130	Pass	
Anthracene	M22-Ma39969	NCP	%	86		70-130	Pass	
Benz(a)anthracene	M22-Ma39969	NCP	%	93		70-130	Pass	
Benzo(a)pyrene	M22-Ma39969	NCP	%	102		70-130	Pass	
Benzo(b&j)fluoranthene	M22-Ma39969	NCP	%	87		70-130	Pass	
Benzo(g,h,i)perylene	M22-Ma39969	NCP	%	92		70-130	Pass	
Benzo(k)fluoranthene	M22-Ma39969	NCP	%	88		70-130	Pass	
Chrysene	M22-Ma39969	NCP	%	95		70-130	Pass	
Dibenz(a,h)anthracene	M22-Ma39969	NCP	%	97		70-130	Pass	
Fluoranthene	M22-Ma39969	NCP	%	94		70-130	Pass	
Fluorene	M22-Ma39969	NCP	%	99		70-130	Pass	
Indeno(1,2,3-cd)pyrene	M22-Ma39969	NCP	%	90		70-130	Pass	
Naphthalene	M22-Ma39969	NCP	%	97		70-130	Pass	
Phenanthrene	M22-Ma39969	NCP	%	90		70-130	Pass	
Pyrene	M22-Ma39969	NCP	%	96		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Organochlorine Pesticides</b>				Result 1				
Chlordanes - Total	M22-Ma57287	NCP	%	107		70-130	Pass	
4,4'-DDD	M22-Ma57287	NCP	%	106		70-130	Pass	
4,4'-DDE	M22-Ma57287	NCP	%	104		70-130	Pass	
4,4'-DDT	M22-Ma57287	NCP	%	85		70-130	Pass	
a-HCH	M22-Ma57287	NCP	%	120		70-130	Pass	
Aldrin	M22-Ma57287	NCP	%	97		70-130	Pass	
b-HCH	M22-Ma57287	NCP	%	75		70-130	Pass	
d-HCH	M22-Ma57287	NCP	%	95		70-130	Pass	
Dieldrin	M22-Ma57287	NCP	%	115		70-130	Pass	
Endosulfan I	M22-Ma57287	NCP	%	115		70-130	Pass	
Endosulfan II	M22-Ma57287	NCP	%	85		70-130	Pass	
Endosulfan sulphate	M22-Ma57287	NCP	%	90		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Endrin	M22-Ma57287	NCP	%	124		70-130	Pass	
Endrin aldehyde	M22-Ma57287	NCP	%	112		70-130	Pass	
Endrin ketone	M22-Ma57287	NCP	%	78		70-130	Pass	
g-HCH (Lindane)	M22-Ma57287	NCP	%	114		70-130	Pass	
Heptachlor	M22-Ma57287	NCP	%	115		70-130	Pass	
Heptachlor epoxide	M22-Ma57287	NCP	%	115		70-130	Pass	
Hexachlorobenzene	M22-Ma57287	NCP	%	113		70-130	Pass	
Methoxychlor	M22-Ma57287	NCP	%	88		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Polychlorinated Biphenyls</b>				Result 1				
Aroclor-1016	M22-Ma45295	NCP	%	87		70-130	Pass	
Aroclor-1260	M22-Ma45295	NCP	%	89		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (Halogenated)</b>				Result 1				
2-Chlorophenol	M22-Ma30064	NCP	%	77		30-130	Pass	
2,4-Dichlorophenol	M22-Ma30064	NCP	%	97		30-130	Pass	
2,4,5-Trichlorophenol	M22-Ma30064	NCP	%	89		30-130	Pass	
2,4,6-Trichlorophenol	M22-Ma30064	NCP	%	81		30-130	Pass	
2,6-Dichlorophenol	M22-Ma30064	NCP	%	91		30-130	Pass	
4-Chloro-3-methylphenol	M22-Ma30064	NCP	%	75		30-130	Pass	
Pentachlorophenol	M22-Ma30064	NCP	%	51		30-130	Pass	
Tetrachlorophenols - Total	M22-Ma30064	NCP	%	67		30-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (non-Halogenated)</b>				Result 1				
2-Cyclohexyl-4,6-dinitrophenol	M22-Ma30064	NCP	%	73		30-130	Pass	
2-Methyl-4,6-dinitrophenol	M22-Ma30064	NCP	%	63		30-130	Pass	
2-Nitrophenol	M22-Ma30064	NCP	%	89		30-130	Pass	
2,4-Dimethylphenol	M22-Ma30064	NCP	%	81		30-130	Pass	
2,4-Dinitrophenol	M22-Ma30064	NCP	%	53		30-130	Pass	
2-Methylphenol (o-Cresol)	M22-Ma30064	NCP	%	69		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-Ma30064	NCP	%	79		30-130	Pass	
4-Nitrophenol	M22-Ma30064	NCP	%	78		30-130	Pass	
Dinoseb	M22-Ma30064	NCP	%	69		30-130	Pass	
Phenol	M22-Ma30064	NCP	%	64		30-130	Pass	
<b>Spike - % Recovery</b>								
				Result 1				
Fluoride (Total)	M22-Ma48861	NCP	%	69		70-130	Fail	Q08
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1				
Perfluorobutanoic acid (PFBA)	M22-Ma39772	CP	%	95		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma39772	CP	%	85		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma39772	CP	%	84		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma39772	CP	%	82		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma39772	CP	%	93		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma39772	CP	%	101		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma39772	CP	%	93		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma39772	CP	%	104		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma39772	CP	%	101		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	M22-Ma39772	CP	%	102		50-150	Pass	
Perfluorotetradecanoic acid (PFTTeDA)	M22-Ma39772	CP	%	98		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1				

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Perfluorooctane sulfonamide (FOSA)	M22-Ma39772	CP	%	105		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma39772	CP	%	98		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma39772	CP	%	95		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma39772	CP	%	93		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma39772	CP	%	96		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma39772	CP	%	98		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma39772	CP	%	78		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>				Result 1				
Perfluorobutanesulfonic acid (PFBS)	M22-Ma39772	CP	%	97		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ma39772	CP	%	129		50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma39772	CP	%	98		50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma39772	CP	%	98		50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma39772	CP	%	99		50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma39772	CP	%	96		50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ma39772	CP	%	96		50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ma39772	CP	%	141		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)</b>				Result 1				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma39772	CP	%	107		50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma39772	CP	%	108		50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma39772	CP	%	93		50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma39772	CP	%	101		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Total Recoverable Hydrocarbons</b>				Result 1				
TRH C6-C9	M22-Ma39773	CP	%	86		70-130	Pass	
Naphthalene	M22-Ma39773	CP	%	78		70-130	Pass	
TRH C6-C10	M22-Ma39773	CP	%	82		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Volatile Organics</b>				Result 1				
1.1-Dichloroethene	M22-Ma39773	CP	%	79		70-130	Pass	
1.1.1-Trichloroethane	M22-Ma39773	CP	%	77		70-130	Pass	
1.2-Dichlorobenzene	M22-Ma39773	CP	%	79		70-130	Pass	
1.2-Dichloroethane	M22-Ma39773	CP	%	81		70-130	Pass	
Benzene	M22-Ma39773	CP	%	80		70-130	Pass	
Ethylbenzene	M22-Ma39773	CP	%	74		70-130	Pass	
m&p-Xylenes	M22-Ma39773	CP	%	76		70-130	Pass	
o-Xylene	M22-Ma39773	CP	%	87		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Toluene	M22-Ma39773	CP	%	85			70-130	Pass	
Trichloroethene	M22-Ma39773	CP	%	114			70-130	Pass	
Xylenes - Total*	M22-Ma39773	CP	%	80			70-130	Pass	
<b>Spike - % Recovery</b>									
				Result 1					
Chromium (hexavalent)	M22-Ma40223	NCP	%	71			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Heavy Metals</b>				Result 1					
Arsenic	M22-Ma50761	NCP	%	85			75-125	Pass	
Cadmium	M22-Ma50761	NCP	%	71			75-125	Fail	Q08
Chromium	M22-Ma50761	NCP	%	80			75-125	Pass	
Copper	M22-Ma50761	NCP	%	83			75-125	Pass	
Lead	M22-Ma50761	NCP	%	74			75-125	Fail	Q08
Mercury	M22-Ma50761	NCP	%	96			75-125	Pass	
Molybdenum	M22-Ma50761	NCP	%	93			75-125	Pass	
Nickel	M22-Ma50761	NCP	%	83			75-125	Pass	
Selenium	M22-Ma50761	NCP	%	88			75-125	Pass	
Silver	M22-Ma50761	NCP	%	75			75-125	Pass	
Tin	M22-Ma50761	NCP	%	91			75-125	Pass	
Zinc	M22-Ma46229	NCP	%	98			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Total Recoverable Hydrocarbons</b>				Result 1	Result 2	RPD			
TRH C6-C9	M22-Ma39772	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	M22-Ma37669	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M22-Ma37669	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
<b>Duplicate</b>									
<b>Volatile Organics</b>				Result 1	Result 2	RPD			
Hexachlorobutadiene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
<b>Duplicate</b>									
<b>Volatile Organics</b>				Result 1	Result 2	RPD			
1.1-Dichloroethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzene	M22-Ma39772	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	



Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Bromobenzene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	M22-Ma39772	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	M22-Ma39772	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	M22-Ma39772	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	M22-Ma39772	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1.2-Dichloroethene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.3-Dichloropropene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-Ma39772	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total*	M22-Ma39772	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-Ma39059	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Cyanide (total)	M22-Ma39772	CP	mg/kg	< 5	< 5	<1	30%	Pass
% Moisture	M22-Ma39772	CP	%	27	29	9.0	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotridecanoic acid (PFTTrDA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma38955	NCP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma38955	NCP	ug/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<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-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma38955	NCP	ug/kg	< 10	< 10	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma38955	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	M22-Ma39775	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M22-Ma39775	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M22-Ma39775	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	M22-Ma39775	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M22-Ma39775	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M22-Ma39775	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1	Result 2	RPD		
Benzo(a)pyrene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
<b>Organochlorine Pesticides</b>				Result 1	Result 2	RPD		
Chlordanes - Total	M22-Ma39775	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-Ma39775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
<b>Polychlorinated Biphenyls</b>				Result 1	Result 2	RPD		
Aroclor-1016	M22-Ma39775	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-Ma39775	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-Ma39775	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-Ma39775	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-Ma39775	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-Ma39775	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-Ma39775	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-Ma39775	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
<b>Phenols (Halogenated)</b>				Result 1	Result 2	RPD		
2-Chlorophenol	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M22-Ma39775	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M22-Ma39775	CP	mg/kg	< 1	< 1	<1	30%	Pass
4-Chloro-3-methylphenol	M22-Ma39775	CP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-Ma39775	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-Ma39775	CP	mg/kg	< 10	< 10	<1	30%	Pass

<b>Duplicate</b>								
<b>Phenols (non-Halogenated)</b>				Result 1	Result 2	RPD		
2-Cyclohexyl-4.6-dinitrophenol	M22-Ma39775	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4.6-dinitrophenol	M22-Ma39775	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-Ma39775	CP	mg/kg	< 1	< 1	<1	30%	Pass
2.4-Dimethylphenol	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4-Dinitrophenol	M22-Ma39775	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-Ma39775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-Ma39775	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M22-Ma39775	CP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-Ma39775	CP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-Ma39775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
<b>Duplicate</b>								
				Result 1	Result 2	RPD		
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Ma39775	CP	pH Units	9.8	9.8	pass	30%	Pass
<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Fluoride (Total)	M22-Ma39776	CP	mg/kg	< 100	< 100	<1	30%	Pass
<b>Duplicate</b>								
<b>Total Recoverable Hydrocarbons</b>				Result 1	Result 2	RPD		
TRH C10-C14	M22-Ma39779	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M22-Ma39779	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M22-Ma39779	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	M22-Ma39779	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M22-Ma39779	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M22-Ma39779	CP	mg/kg	< 100	< 100	<1	30%	Pass
<b>Duplicate</b>								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1	Result 2	RPD		
Acenaphthene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
<b>Duplicate</b>								
<b>Organochlorine Pesticides</b>				Result 1	Result 2	RPD		
Chlordanes - Total	M22-Ma39779	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4.4'-DDD	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4.4'-DDE	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4.4'-DDT	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
<b>Organochlorine Pesticides</b>				Result 1	Result 2	RPD		
Endosulfan I	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-Ma39779	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
<b>Polychlorinated Biphenyls</b>				Result 1	Result 2	RPD		
Aroclor-1016	M22-Ma39779	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-Ma39779	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-Ma39779	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-Ma39779	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-Ma39779	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-Ma39779	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-Ma39779	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-Ma39779	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
<b>Phenols (Halogenated)</b>				Result 1	Result 2	RPD		
2-Chlorophenol	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M22-Ma39779	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M22-Ma39779	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-Ma39779	CP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-Ma39779	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-Ma39779	CP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
<b>Phenols (non-Halogenated)</b>				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	M22-Ma39779	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M22-Ma39779	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-Ma39779	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	M22-Ma39779	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-Ma39779	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-Ma39779	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M22-Ma39779	CP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-Ma39779	CP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-Ma39779	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Ma39780	CP	pH Units	9.4	9.4	pass	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Fluoride (Total)	M22-Ma39781	CP	mg/kg	< 100	< 100	<1	30%	Pass
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Ma39781	CP	pH Units	9.3	9.4	pass	30%	Pass

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M22-Ma50771	NCP	mg/kg	5.8	7.8	30	30%	Pass
Cadmium	M22-Ma50771	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M22-Ma50771	NCP	mg/kg	68	73	7.0	30%	Pass
Copper	M22-Ma50771	NCP	mg/kg	24	28	17	30%	Pass
Lead	M22-Ma50771	NCP	mg/kg	41	48	14	30%	Pass
Mercury	M22-Ma50771	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M22-Ma50771	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M22-Ma50771	NCP	mg/kg	29	32	9.0	30%	Pass
Selenium	M22-Ma50771	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M22-Ma50771	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-Ma50771	NCP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M22-Ma50771	NCP	mg/kg	74	87	16	30%	Pass

**Comments**
**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).
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.

**Authorised by:**

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

**Work Order** : **EM2204843**  
**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** : 20220318042901-ALS-12  
**Sampler** : ----  
**Site** : 20220318042901-ALS-12  
**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** : 18-Mar-2022 11:40  
**Date Analysis Commenced** : 21-Mar-2022  
**Issue Date** : 25-Mar-2022 16:50



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
Nikki Stepniewski	Senior Inorganic Instrument Chemist	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.

- EP231X: Poor matrix spike recovery for sample EM2204488-009 due to sample matrix interference.
- 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.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.
- 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_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS	SX_OB_20220317_12_04_SS_Primary_ALS	SX_OB_20220317_15_54_SS_Primary_ALS	SX_OB_20220317_16_03_SS_Triplicate_ALS
Sampling date / time				17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
Compound	CAS Number	LOR	Unit	EM2204843-001	EM2204843-002	EM2204843-005	EM2204843-006	EM2204843-007
				Result	Result	Result	Result	Result
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
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
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
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_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS	SX_OB_20220317_12_04_SS_Primary_ALS	SX_OB_20220317_15_54_SS_Primary_ALS	SX_OB_20220317_16_03_SS_Triplicate_ALS
Sampling date / time				17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
Compound	CAS Number	LOR	Unit	EM2204843-001	EM2204843-002	EM2204843-005	EM2204843-006	EM2204843-007
				Result	Result	Result	Result	Result
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
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
<b>EP231P: PFAS Sums</b>								
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
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	98.3	92.7	108	94.3	92.4
13C8-PFOA	----	0.02	%	103	102	101	105	100



## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220317_19 _57_SS_Primary_ALS	SX_OB_20220318_00 _02_SS_Primary_ALS	SX_OB_20220318_04 _02_SS_Primary_ALS	----	----
Sampling date / time				17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	----	----
Compound	CAS Number	LOR	Unit	EM2204843-008	EM2204843-009	EM2204843-010	-----	-----
				Result	Result	Result	----	----
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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	----	----
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
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	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
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_20220317_19 _57_SS_Primary_ALS	SX_OB_20220318_00 _02_SS_Primary_ALS	SX_OB_20220318_04 _02_SS_Primary_ALS	----	----
Sampling date / time				17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	----	----
Compound	CAS Number	LOR	Unit	EM2204843-008	EM2204843-009	EM2204843-010	-----	-----
				Result	Result	Result	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
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	----	----
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
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	----	----
<b>EP231P: PFAS Sums</b>								
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	----	----
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	98.5	95.4	96.8	----	----
13C8-PFOA	----	0.02	%	105	109	104	----	----



## Analytical Results

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

Sample ID

				SX_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS	SX_OB_20220317_12_04_SS_Primary_ALS	SX_OB_20220317_15_54_SS_Primary_ALS	SX_OB_20220317_16_03_SS_Triplicate_ALS
Sampling date / time				17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
Compound	CAS Number	LOR	Unit	EM2204843-011	EM2204843-012	EM2204843-013	EM2204843-014	EM2204843-015
				Result	Result	Result	Result	Result
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
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
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
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_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS	SX_OB_20220317_12_04_SS_Primary_ALS	SX_OB_20220317_15_54_SS_Primary_ALS	SX_OB_20220317_16_03_SS_Triplicate_ALS
Sampling date / time				17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
Compound	CAS Number	LOR	Unit	EM2204843-011	EM2204843-012	EM2204843-013	EM2204843-014	EM2204843-015
				Result	Result	Result	Result	Result
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
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
<b>EP231P: PFAS Sums</b>								
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
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	94.5	96.2	85.9	81.5	85.3
13C8-PFOA	----	0.02	%	104	106	106	98.4	105



## Analytical Results

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

Sample ID

				SX_OB_20220317_19 _57_SS_Primary_ALS	SX_OB_20220318_00 _02_SS_Primary_ALS	SX_OB_20220318_04 _02_SS_Primary_ALS	----	----
Sampling date / time				17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 04:02	----	----
Compound	CAS Number	LOR	Unit	EM2204843-016	EM2204843-017	EM2204843-018	-----	-----
				Result	Result	Result	----	----
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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	----	----
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
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	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
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_20220317_19 _57_SS_Primary_ALS	SX_OB_20220318_00 _02_SS_Primary_ALS	SX_OB_20220318_04 _02_SS_Primary_ALS	----	----
Sampling date / time				17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 04:02	----	----
Compound	CAS Number	LOR	Unit	EM2204843-016	EM2204843-017	EM2204843-018	-----	-----
				Result	Result	Result	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
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	----	----
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
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	----	----
<b>EP231P: PFAS Sums</b>								
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	----	----
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	86.3	85.2	87.6	----	----
13C8-PFOA	----	0.02	%	109	105	102	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS	SX_OB_20220317_12_04_SS_Primary_ALS	SX_OB_20220317_15_54_SS_Primary_ALS	SX_OB_20220317_16_03_SS_Triplicate_ALS
Sampling date / time				17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
Compound	CAS Number	LOR	Unit	EM2204843-001	EM2204843-002	EM2204843-005	EM2204843-006	EM2204843-007
				Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
pH (CaCl2)	----	0.1	pH Unit	7.8	7.8	8.7	8.8	8.7
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	32.3	31.7	35.4	34.0	28.6
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	18	17	22	24	28
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	5	mg/kg	83	81	58	71	66
Copper	7440-50-8	5	mg/kg	48	43	31	29	38
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	132	118	83	79	119
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	72	50	44	74
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>								
Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
Total Cyanide	57-12-5	5	mg/kg	<5	<5	<5	<5	<5
<b>EK040T: Fluoride Total</b>								
Fluoride	16984-48-8	100	mg/kg	310	190	<100	120	180
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Initial pH	----	0.1	pH Unit	9.4	9.3	9.3	9.3	9.9
After HCl pH	----	0.1	pH Unit	1.6	1.6	1.6	1.6	1.7
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	5.1	5.1
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>								
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_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS	SX_OB_20220317_12_04_SS_Primary_ALS	SX_OB_20220317_15_54_SS_Primary_ALS	SX_OB_20220317_16_03_SS_Triplicate_ALS
Sampling date / time				17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
Compound	CAS Number	LOR	Unit	EM2204843-001	EM2204843-002	EM2204843-005	EM2204843-006	EM2204843-007
				Result	Result	Result	Result	Result
<b>EP074A: Monocyclic Aromatic Hydrocarbons - Continued</b>								
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
<b>EP074H: Naphthalene</b>								
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
<b>EP074I: Volatile Halogenated Compounds</b>								
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
<b>EP075A: Phenolic Compounds (Halogenated)</b>								



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS	SX_OB_20220317_12_04_SS_Primary_ALS	SX_OB_20220317_15_54_SS_Primary_ALS	SX_OB_20220317_16_03_SS_Triplicate_ALS
Sampling date / time				17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
Compound	CAS Number	LOR	Unit	EM2204843-001	EM2204843-002	EM2204843-005	EM2204843-006	EM2204843-007
				Result	Result	Result	Result	Result
<b>EP075A: Phenolic Compounds (Halogenated) - Continued</b>								
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
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
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
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
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_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS	SX_OB_20220317_12_04_SS_Primary_ALS	SX_OB_20220317_15_54_SS_Primary_ALS	SX_OB_20220317_16_03_SS_Triplicate_ALS
Sampling date / time				17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
Compound	CAS Number	LOR	Unit	EM2204843-001	EM2204843-002	EM2204843-005	EM2204843-006	EM2204843-007
				Result	Result	Result	Result	Result
<b>EP075B: Polynuclear Aromatic Hydrocarbons - Continued</b>								
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	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>
<b>EP075I: Organochlorine Pesticides</b>								
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_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS	SX_OB_20220317_12_04_SS_Primary_ALS	SX_OB_20220317_15_54_SS_Primary_ALS	SX_OB_20220317_16_03_SS_Triplicate_ALS
Sampling date / time				17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
Compound	CAS Number	LOR	Unit	EM2204843-001	EM2204843-002	EM2204843-005	EM2204843-006	EM2204843-007
				Result	Result	Result	Result	Result
<b>EP075I: Organochlorine Pesticides - Continued</b>								
^ 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
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
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
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
>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
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS	SX_OB_20220317_12_04_SS_Primary_ALS	SX_OB_20220317_15_54_SS_Primary_ALS	SX_OB_20220317_16_03_SS_Triplicate_ALS
Sampling date / time				17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
Compound	CAS Number	LOR	Unit	EM2204843-001	EM2204843-002	EM2204843-005	EM2204843-006	EM2204843-007
				Result	Result	Result	Result	Result
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
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
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS	SX_OB_20220317_12_04_SS_Primary_ALS	SX_OB_20220317_15_54_SS_Primary_ALS	SX_OB_20220317_16_03_SS_Triplicate_ALS
Sampling date / time				17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
Compound	CAS Number	LOR	Unit	EM2204843-001	EM2204843-002	EM2204843-005	EM2204843-006	EM2204843-007
				Result	Result	Result	Result	Result
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued</b>								
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
<b>EP231P: PFAS Sums</b>								
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
<b>EP066S: PCB Surrogate</b>								
Decachlorobiphenyl	2051-24-3	0.1	%	98.4	93.1	98.0	102	94.0
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	82.3	88.3	94.3	86.2	90.8
Toluene-D8	2037-26-5	0.1	%	79.4	87.4	92.7	84.7	91.0
4-Bromofluorobenzene	460-00-4	0.1	%	89.0	99.4	100	94.9	99.3
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>								
Phenol-d6	13127-88-3	0.025	%	95.6	87.2	94.5	104	92.0
2-Chlorophenol-D4	93951-73-6	0.025	%	114	106	115	123	110
2,4,6-Tribromophenol	118-79-6	0.025	%	93.9	82.4	86.2	90.8	79.8
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>								
Nitrobenzene-D5	4165-60-0	0.025	%	101	93.2	101	107	97.9
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	96.1	89.7	98.1	106	93.6
2-Fluorobiphenyl	321-60-8	0.025	%	99.1	95.2	102	103	101
Anthracene-d10	1719-06-8	0.025	%	95.4	93.2	95.0	105	95.3
4-Terphenyl-d14	1718-51-0	0.025	%	100	94.7	97.2	116	103
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.0002	%	84.6	123	118	96.6	95.6
13C8-PFOA	----	0.0002	%	103	112	112	112	117





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)		Sample ID			SX_OB_20220317_19_57_SS_Primary_ALS	SX_OB_20220318_00_02_SS_Primary_ALS	SX_OB_20220318_04_02_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS
		Sampling date / time			17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	17-Mar-2022 07:53	17-Mar-2022 07:53
Compound	CAS Number	LOR	Unit	EM2204843-008	EM2204843-009	EM2204843-010	EM2204843-011	EM2204843-012	
				Result	Result	Result	Result	Result	
<b>EA001: pH in soil using 0.01M CaCl extract</b>									
pH (CaCl <sub>2</sub> )	----	0.1	pH Unit	8.8	8.9	8.8	----	----	
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	----	1.0	%	28.4	36.2	33.6	----	----	
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Arsenic	7440-38-2	5	mg/kg	21	41	42	----	----	
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	----	
Chromium	7440-47-3	5	mg/kg	100	98	90	----	----	
Copper	7440-50-8	5	mg/kg	61	56	52	----	----	
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	189	156	129	----	----	
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	105	94	91	----	----	
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	----	----	
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>									
Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	<1.0	----	----	
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	5	mg/kg	<5	<5	<5	----	----	
<b>EK040T: Fluoride Total</b>									
Fluoride	16984-48-8	100	mg/kg	180	170	110	----	----	
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>									
Initial pH	----	0.1	pH Unit	9.7	9.9	9.7	----	----	
After HCl pH	----	0.1	pH Unit	1.7	1.6	1.7	----	----	
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	----	----	
Final pH	----	0.1	pH Unit	5.1	5.1	5.1	----	----	
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>									
Final pH	----	0.1	pH Unit	----	----	----	9.4	9.4	
<b>EP066: Polychlorinated Biphenyls (PCB)</b>									
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	----	----	
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>									



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220317_19_57_SS_Primary_ALS	SX_OB_20220318_00_02_SS_Primary_ALS	SX_OB_20220318_04_02_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS
Sampling date / time				17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	17-Mar-2022 07:53	17-Mar-2022 07:53
Compound	CAS Number	LOR	Unit	EM2204843-008	EM2204843-009	EM2204843-010	EM2204843-011	EM2204843-012
				Result	Result	Result	Result	Result
<b>EP074A: Monocyclic Aromatic Hydrocarbons - Continued</b>								
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	----	----
<b>EP074H: Naphthalene</b>								
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	----	----
<b>EP074I: Volatile Halogenated Compounds</b>								
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	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>								



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220317_19_57_SS_Primary_ALS	SX_OB_20220318_00_02_SS_Primary_ALS	SX_OB_20220318_04_02_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS
Sampling date / time				17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	17-Mar-2022 07:53	17-Mar-2022 07:53
Compound	CAS Number	LOR	Unit	EM2204843-008	EM2204843-009	EM2204843-010	EM2204843-011	EM2204843-012
				Result	Result	Result	Result	Result
<b>EP075A: Phenolic Compounds (Halogenated) - Continued</b>								
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	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
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	----	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
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	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220317_19_57_SS_Primary_ALS	SX_OB_20220318_00_02_SS_Primary_ALS	SX_OB_20220318_04_02_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS
Sampling date / time				17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	17-Mar-2022 07:53	17-Mar-2022 07:53
Compound	CAS Number	LOR	Unit	EM2204843-008	EM2204843-009	EM2204843-010	EM2204843-011	EM2204843-012
				Result	Result	Result	Result	Result
<b>EP075B: Polynuclear Aromatic Hydrocarbons - Continued</b>								
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	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	----	----
<b>EP075I: Organochlorine Pesticides</b>								
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	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.30	mg/kg	<0.30	<0.30	<0.30	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220317_19_57_SS_Primary_ALS	SX_OB_20220318_00_02_SS_Primary_ALS	SX_OB_20220318_04_02_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS
Sampling date / time				17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	17-Mar-2022 07:53	17-Mar-2022 07:53
Compound	CAS Number	LOR	Unit	EM2204843-008	EM2204843-009	EM2204843-010	EM2204843-011	EM2204843-012
				Result	Result	Result	Result	Result
<b>EP075I: Organochlorine Pesticides - Continued</b>								
^ 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	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
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	----	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
>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	----	----
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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	----	----
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	5	µg/kg	<5	<5	<5	----	----



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_OB_20220317_19_57_SS_Primary_ALS	SX_OB_20220318_00_02_SS_Primary_ALS	SX_OB_20220318_04_02_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS
Sampling date / time				17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	17-Mar-2022 07:53	17-Mar-2022 07:53	
Compound	CAS Number	LOR	Unit	EM2204843-008	EM2204843-009	EM2204843-010	EM2204843-011	EM2204843-012	
				Result	Result	Result	Result	Result	
<b>EP231B: Perfluoroalkyl Carboxylic Acids - Continued</b>									
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	----	----	
<b>EP231C: Perfluoroalkyl Sulfonamides</b>									
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	----	----	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	5.0	µg/kg	<5.0	<5.0	<5.0	----	----	



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_OB_20220317_19_57_SS_Primary_ALS	SX_OB_20220318_00_02_SS_Primary_ALS	SX_OB_20220318_04_02_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Primary_ALS	SX_IB_20220317_07_53_SS_Duplicate_ALS
Sampling date / time				17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	17-Mar-2022 07:53	17-Mar-2022 07:53	
Compound	CAS Number	LOR	Unit	EM2204843-008	EM2204843-009	EM2204843-010	EM2204843-011	EM2204843-012	
				Result	Result	Result	Result	Result	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued</b>									
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	----	----	
<b>EP231P: PFAS Sums</b>									
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	----	----	
<b>EP066S: PCB Surrogate</b>									
Decachlorobiphenyl	2051-24-3	0.1	%	100	98.0	100	----	----	
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	96.7	88.5	91.5	----	----	
Toluene-D8	2037-26-5	0.1	%	95.6	84.1	94.5	----	----	
4-Bromofluorobenzene	460-00-4	0.1	%	104	90.2	102	----	----	
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>									
Phenol-d6	13127-88-3	0.025	%	97.9	102	104	----	----	
2-Chlorophenol-D4	93951-73-6	0.025	%	116	122	125	----	----	
2,4,6-Tribromophenol	118-79-6	0.025	%	93.7	89.1	93.3	----	----	
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>									
Nitrobenzene-D5	4165-60-0	0.025	%	99.8	105	107	----	----	
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	98.9	103	106	----	----	
2-Fluorobiphenyl	321-60-8	0.025	%	103	100	105	----	----	
Anthracene-d10	1719-06-8	0.025	%	102	98.8	107	----	----	
4-Terphenyl-d14	1718-51-0	0.025	%	109	99.1	108	----	----	
<b>EP231S: PFAS Surrogate</b>									
13C4-PFOS	----	0.0002	%	102	114	114	----	----	
13C8-PFOA	----	0.0002	%	113	117	111	----	----	



**Analytical Results**

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220317_12_04_SS_Primary_ALS	SX_OB_20220317_15_54_SS_Primary_ALS	SX_OB_20220317_16_03_SS_Triplicate_ALS	SX_OB_20220317_19_57_SS_Primary_ALS	SX_OB_20220318_00_02_SS_Primary_ALS
Sampling date / time				17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03	17-Mar-2022 19:57	18-Mar-2022 00:02
Compound	CAS Number	LOR	Unit	EM2204843-013	EM2204843-014	EM2204843-015	EM2204843-016	EM2204843-017
				Result	Result	Result	Result	Result
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Final pH	----	0.1	pH Unit	10.0	10.1	10.0	10.0	10.1





**Analytical Results**

Sub-Matrix: <b>SOIL</b> (Matrix: <b>SOIL</b> )			Sample ID	<b>SX_OB_20220318_04_02_SS_Primary_ALS</b>	----	----	----	----
			Sampling date / time	18-Mar-2022 04:02	----	----	----	----
Compound	CAS Number	LOR	Unit	<b>EM2204843-018</b>	-----	-----	-----	-----
				Result	---	---	---	---
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
<b>Final pH</b>	----	0.1	pH Unit	<b>10.0</b>	---	---	---	---



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		SX_IB_20220317_08_34_SR_Rinsate_ALS	SX_IB_20220317_08_36_SB_Blank_ALS	----	----	----
		Sampling date / time		17-Mar-2022 08:34	17-Mar-2022 08:36	----	----	----
Compound	CAS Number	LOR	Unit	EM2204843-003	EM2204843-004	-----	-----	-----
				Result	Result	---	---	---
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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	----	----	----
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
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 (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
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_IB_20220317_08_34_SR_Rinsate_ALS	SX_IB_20220317_08_36_SB_Blank_ALS	----	----	----
Sampling date / time				17-Mar-2022 08:34	17-Mar-2022 08:36	----	----	----	
Compound	CAS Number	LOR	Unit	EM2204843-003	EM2204843-004	-----	-----	-----	
				Result	Result	---	---	---	
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>									
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	----	----	----	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>									
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	----	----	----	
<b>EP231P: PFAS Sums</b>									
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	----	----	----	
<b>EP231S: PFAS Surrogate</b>									
13C4-PFOS	----	0.02	%	105	109	----	----	----	
13C8-PFOA	----	0.02	%	105	103	----	----	----	



## Surrogate Control Limits

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

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

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP066S: PCB Surrogate</b>			
Decachlorobiphenyl	2051-24-3	41	122
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>			
1,2-Dichloroethane-D4	17060-07-0	59	119
Toluene-D8	2037-26-5	55	117
4-Bromofluorobenzene	460-00-4	59	123
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>			
Phenol-d6	13127-88-3	63	134
2-Chlorophenol-D4	93951-73-6	60	125
2,4,6-Tribromophenol	118-79-6	54	129
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>			
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
<b>EP231S: PFAS Surrogate</b>			
13C4-PFOS	----	68	136
13C8-PFOA	----	69	133

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

## QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EM2204843	Page	: 1 of 13
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: CRAIG TRIMBUR	Telephone	: +6138549 9600
Project	: JC0927	Date Samples Received	: 18-Mar-2022
Site	: 20220318042901-ALS-12	Issue Date	: 25-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
<b>Matrix Spike (MS) Recoveries</b>							
EP075B: Polynuclear Aromatic Hydrocarbons	EM2204690--067	Anonymous	<b>Acenaphthene</b>	83-32-9	Not Determined	----	<b>MS recovery not determined, background level greater than or equal to 4x spike level.</b>
EP075B: Polynuclear Aromatic Hydrocarbons	EM2204690--067	Anonymous	<b>Pyrene</b>	129-00-0	Not Determined	----	<b>MS recovery not determined, background level greater than or equal to 4x spike level.</b>

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
<b>Matrix Spike (MS) Recoveries</b>							
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2204488--009	Anonymous	<b>10:2 Fluorotelomer sulfonic acid (10:2 FTS)</b>	120226-60-0	61.2 %	70.0-130%	<b>Recovery less than lower data quality objective</b>

### Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
<b>Soil Glass Jar - Unpreserved (EA001)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	24-Mar-2022	24-Mar-2022	✓	24-Mar-2022	24-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EA001)</b>								
SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	24-Mar-2022	25-Mar-2022	✓	24-Mar-2022	24-Mar-2022	✓
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
<b>Soil Glass Jar - Unpreserved (EA055)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	----	----	----	23-Mar-2022	31-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EA055)</b>								
SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	----	----	----	23-Mar-2022	01-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	
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
<b>Soil Glass Jar - Unpreserved (EG005T)</b> SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	23-Mar-2022	13-Sep-2022	✓	23-Mar-2022	13-Sep-2022	✓
<b>Soil Glass Jar - Unpreserved (EG005T)</b> SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	23-Mar-2022	14-Sep-2022	✓	23-Mar-2022	14-Sep-2022	✓
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
<b>Soil Glass Jar - Unpreserved (EG035T)</b> SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	23-Mar-2022	14-Apr-2022	✓	24-Mar-2022	14-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EG035T)</b> SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	23-Mar-2022	15-Apr-2022	✓	24-Mar-2022	15-Apr-2022	✓
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>								
<b>Soil Glass Jar - Unpreserved (EG048G)</b> SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	23-Mar-2022	14-Apr-2022	✓	24-Mar-2022	30-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EG048G)</b> SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	23-Mar-2022	15-Apr-2022	✓	24-Mar-2022	30-Mar-2022	✓
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
<b>Soil Glass Jar - Unpreserved (EK026SF)</b> SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	23-Mar-2022	31-Mar-2022	✓	24-Mar-2022	06-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EK026SF)</b> SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	23-Mar-2022	01-Apr-2022	✓	24-Mar-2022	06-Apr-2022	✓
<b>EK040T: Fluoride Total</b>								
<b>Soil Glass Jar - Unpreserved (EK040T)</b> SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	23-Mar-2022	14-Apr-2022	✓	25-Mar-2022	14-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EK040T)</b> SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	23-Mar-2022	15-Apr-2022	✓	25-Mar-2022	15-Apr-2022	✓
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
<b>Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	23-Mar-2022	13-Sep-2022	✓	----	----	----
<b>Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P)</b> SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	23-Mar-2022	14-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	
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
<b>Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	23-Mar-2022	13-Sep-2022	✓	----	----	----
<b>Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P)</b>								
SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	23-Mar-2022	14-Sep-2022	✓	----	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
<b>Soil Glass Jar - Unpreserved (EP066-EM)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	23-Mar-2022	31-Mar-2022	✓	23-Mar-2022	02-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP066-EM)</b>								
SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	23-Mar-2022	01-Apr-2022	✓	23-Mar-2022	02-May-2022	✓
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	22-Mar-2022	24-Mar-2022	✓	22-Mar-2022	24-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	22-Mar-2022	25-Mar-2022	✓	22-Mar-2022	25-Mar-2022	✓
<b>EP074H: Naphthalene</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	22-Mar-2022	24-Mar-2022	✓	22-Mar-2022	24-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	22-Mar-2022	25-Mar-2022	✓	22-Mar-2022	25-Mar-2022	✓
<b>EP074I: Volatile Halogenated Compounds</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	22-Mar-2022	24-Mar-2022	✓	22-Mar-2022	24-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	22-Mar-2022	25-Mar-2022	✓	22-Mar-2022	25-Mar-2022	✓
<b>EP075A: Phenolic Compounds (Halogenated)</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	23-Mar-2022	31-Mar-2022	✓	23-Mar-2022	02-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b>								
SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	23-Mar-2022	01-Apr-2022	✓	23-Mar-2022	02-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	
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	23-Mar-2022	31-Mar-2022	✓	23-Mar-2022	02-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	23-Mar-2022	01-Apr-2022	✓	23-Mar-2022	02-May-2022	✓
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	23-Mar-2022	31-Mar-2022	✓	23-Mar-2022	02-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	23-Mar-2022	01-Apr-2022	✓	23-Mar-2022	02-May-2022	✓
<b>EP075I: Organochlorine Pesticides</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	23-Mar-2022	31-Mar-2022	✓	23-Mar-2022	02-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	23-Mar-2022	01-Apr-2022	✓	23-Mar-2022	02-May-2022	✓
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	22-Mar-2022	24-Mar-2022	✓	22-Mar-2022	24-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b> SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	23-Mar-2022	31-Mar-2022	✓	24-Mar-2022	02-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	22-Mar-2022	25-Mar-2022	✓	22-Mar-2022	25-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b> SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	23-Mar-2022	01-Apr-2022	✓	24-Mar-2022	02-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	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	22-Mar-2022	24-Mar-2022	✓	22-Mar-2022	24-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	23-Mar-2022	31-Mar-2022	✓	24-Mar-2022	02-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	22-Mar-2022	25-Mar-2022	✓	22-Mar-2022	25-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b>								
SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	23-Mar-2022	01-Apr-2022	✓	24-Mar-2022	02-May-2022	✓
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	21-Mar-2022	13-Sep-2022	✓	23-Mar-2022	30-Apr-2022	✓
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	21-Mar-2022	14-Sep-2022	✓	23-Mar-2022	30-Apr-2022	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	21-Mar-2022	13-Sep-2022	✓	23-Mar-2022	30-Apr-2022	✓
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	21-Mar-2022	14-Sep-2022	✓	23-Mar-2022	30-Apr-2022	✓
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	21-Mar-2022	13-Sep-2022	✓	23-Mar-2022	30-Apr-2022	✓
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	21-Mar-2022	14-Sep-2022	✓	23-Mar-2022	30-Apr-2022	✓
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	21-Mar-2022	13-Sep-2022	✓	23-Mar-2022	30-Apr-2022	✓
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	21-Mar-2022	14-Sep-2022	✓	23-Mar-2022	30-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	
<b>EP231P: PFAS Sums</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS	17-Mar-2022	21-Mar-2022	13-Sep-2022	✓	23-Mar-2022	30-Apr-2022	✓
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220318_00_02_SS_Primary_ALS,	SX_OB_20220318_04_02_SS_Primary_ALS	18-Mar-2022	21-Mar-2022	14-Sep-2022	✓	23-Mar-2022	30-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	
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
<b>HDPE (no PTFE) (EP231X)</b> SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS, SX_OB_20220318_00_02_SS_Primary_ALS, SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS, SX_OB_20220318_00_02_SS_Primary_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS, SX_OB_20220318_04_02_SS_Primary_ALS, SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS, SX_OB_20220318_04_02_SS_Primary_ALS	23-Mar-2022	24-Mar-2022	19-Sep-2022	✓	24-Mar-2022	19-Sep-2022	✓
<b>Miscellaneous Plastic bottle - Unpreserved (EP231X-INJ)</b> SX_IB_20220317_08_34_SR_Rinsate_ALS,	SX_IB_20220317_08_36_SB_Blank_ALS	17-Mar-2022	22-Mar-2022	13-Sep-2022	✓	22-Mar-2022	13-Sep-2022	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>HDPE (no PTFE) (EP231X)</b> SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS, SX_OB_20220318_00_02_SS_Primary_ALS, SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS, SX_OB_20220318_00_02_SS_Primary_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS, SX_OB_20220318_04_02_SS_Primary_ALS, SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS, SX_OB_20220318_04_02_SS_Primary_ALS	23-Mar-2022	24-Mar-2022	19-Sep-2022	✓	24-Mar-2022	19-Sep-2022	✓
<b>Miscellaneous Plastic bottle - Unpreserved (EP231X-INJ)</b> SX_IB_20220317_08_34_SR_Rinsate_ALS,	SX_IB_20220317_08_36_SB_Blank_ALS	17-Mar-2022	22-Mar-2022	13-Sep-2022	✓	22-Mar-2022	13-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	
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
<b>HDPE (no PTFE) (EP231X)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS, SX_OB_20220318_00_02_SS_Primary_ALS, SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS, SX_OB_20220318_00_02_SS_Primary_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS, SX_OB_20220318_04_02_SS_Primary_ALS, SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS, SX_OB_20220318_04_02_SS_Primary_ALS	23-Mar-2022	24-Mar-2022	19-Sep-2022	✓	24-Mar-2022	19-Sep-2022	✓
<b>Miscellaneous Plastic bottle - Unpreserved (EP231X-INJ)</b>								
SX_IB_20220317_08_34_SR_Rinsate_ALS,	SX_IB_20220317_08_36_SB_Blank_ALS	17-Mar-2022	22-Mar-2022	13-Sep-2022	✓	22-Mar-2022	13-Sep-2022	✓
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
<b>HDPE (no PTFE) (EP231X)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS, SX_OB_20220318_00_02_SS_Primary_ALS, SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS, SX_OB_20220318_00_02_SS_Primary_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS, SX_OB_20220318_04_02_SS_Primary_ALS, SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS, SX_OB_20220318_04_02_SS_Primary_ALS	23-Mar-2022	24-Mar-2022	19-Sep-2022	✓	24-Mar-2022	19-Sep-2022	✓
<b>Miscellaneous Plastic bottle - Unpreserved (EP231X-INJ)</b>								
SX_IB_20220317_08_34_SR_Rinsate_ALS,	SX_IB_20220317_08_36_SB_Blank_ALS	17-Mar-2022	22-Mar-2022	13-Sep-2022	✓	22-Mar-2022	13-Sep-2022	✓
<b>EP231P: PFAS Sums</b>								
<b>HDPE (no PTFE) (EP231X)</b>								
SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS, SX_OB_20220318_00_02_SS_Primary_ALS, SX_IB_20220317_07_53_SS_Primary_ALS, SX_OB_20220317_12_04_SS_Primary_ALS, SX_OB_20220317_16_03_SS_Triplicate_ALS, SX_OB_20220318_00_02_SS_Primary_ALS,	SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS, SX_OB_20220318_04_02_SS_Primary_ALS, SX_IB_20220317_07_53_SS_Duplicate_ALS, SX_OB_20220317_15_54_SS_Primary_ALS, SX_OB_20220317_19_57_SS_Primary_ALS, SX_OB_20220318_04_02_SS_Primary_ALS	23-Mar-2022	24-Mar-2022	19-Sep-2022	✓	24-Mar-2022	19-Sep-2022	✓
<b>Miscellaneous Plastic bottle - Unpreserved (EP231X-INJ)</b>								
SX_IB_20220317_08_34_SR_Rinsate_ALS,	SX_IB_20220317_08_36_SB_Blank_ALS	17-Mar-2022	22-Mar-2022	13-Sep-2022	✓	22-Mar-2022	13-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	
<b>Laboratory Duplicates (DUP)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
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	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	5	40	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	2	15	13.33	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
<b>Laboratory Control Samples (LCS)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	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	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	15	6.67	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
<b>Method Blanks (MB)</b>							
Deionised Water Leach - Plastic Leaching Vessel	EN60-DIa-P	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	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	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	15	6.67	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	
<b>Analytical Methods</b>							
<b>Matrix Spikes (MS)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	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	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	15	6.67	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	
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	40	10.00	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
<b>Laboratory Control Samples (LCS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	40	5.00	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
<b>Method Blanks (MB)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	40	5.00	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
<b>Matrix Spikes (MS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	40	5.00	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 <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> ) (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 <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> SO <sub>4</sub> 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.

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NATA Accredited  
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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 **872697-L**  
Project name **20220319045141-Eurofin-12**  
Project ID **JC0927**  
Received Date **Mar 19, 2022**

Client Sample ID			SX_OB_20220 318_08_10_SS _TriPLICATE_EU F	SX_OB_20220 318_08_15_SS _Primary_EUF	SX_OB_20220 318_12_07_SS _Primary_EUF	SX_OB_20220 318_16_03_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-Ma39782	M22-Ma39783	M22-Ma39784	M22-Ma39785
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>AUS Leaching Procedure</b>						
Leachate Fluid <sup>C01</sup>		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	5.0	5.0	5.0	5.0
pH (off)	0.1	pH Units	5.2	5.1	5.1	5.2
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	106	91	101	107
13C5-PFPeA (surr.)	1	%	86	70	77	93
13C5-PFHxA (surr.)	1	%	78	64	73	78
13C4-PFHpA (surr.)	1	%	84	70	79	79
13C8-PFOA (surr.)	1	%	52	51	52	113
13C5-PFNA (surr.)	1	%	84	69	74	72
13C6-PFDA (surr.)	1	%	138	109	123	106
13C2-PFUnDA (surr.)	1	%	133	118	116	97
13C2-PFDoDA (surr.)	1	%	137	161	119	91
13C2-PFTeDA (surr.)	1	%	138	115	122	86
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			SX_OB_20220 318_08_10_SS _Triuplicate_EU F	SX_OB_20220 318_08_15_SS _Primary_EUF	SX_OB_20220 318_12_07_SS _Primary_EUF	SX_OB_20220 318_16_03_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-Ma39782	M22-Ma39783	M22-Ma39784	M22-Ma39785
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonamido substances</b>						
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	126	106	115	108
D3-N-MeFOSA (surr.)	1	%	173	103	149	84
D5-N-EtFOSA (surr.)	1	%	175	128	153	85
D7-N-MeFOSE (surr.)	1	%	135	124	120	107
D9-N-EtFOSE (surr.)	1	%	133	138	120	104
D5-N-EtFOSAA (surr.)	1	%	111	104	80	75
D3-N-MeFOSAA (surr.)	1	%	75	78	67	56
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	74	63	70	85
18O2-PFHxS (surr.)	1	%	94	80	85	93
13C8-PFOS (surr.)	1	%	112	88	99	92
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	81	63	82	89
13C2-6:2 FTSA (surr.)	1	%	85	54	71	64
13C2-8:2 FTSA (surr.)	1	%	82	59	57	65
13C2-10:2 FTSA (surr.)	1	%	122	143	116	80
<b>PFASs Summations</b>						
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_OB_20220 318_16_04_SS Duplicate_EU F	SX_OB_20220 318_20_01_SS Primary_EUF	SX_OB_20220 319_00_09_SS Primary_EUF	SX_OB_20220 319_04_03_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-Ma39786	M22-Ma39787	M22-Ma39788	M22-Ma39789
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 19, 2022	Mar 19, 2022
Test/Reference	LOR	Unit				
<b>AUS Leaching Procedure</b>						
Leachate Fluid <sup>C01</sup>		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	5.0	5.0	5.0	5.0
pH (off)	0.1	pH Units	5.2	5.1	5.1	5.0
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	109	107	109	107
13C5-PFPeA (surr.)	1	%	86	98	93	83
13C5-PFHxA (surr.)	1	%	78	81	76	78
13C4-PFHpA (surr.)	1	%	82	84	81	76
13C8-PFOA (surr.)	1	%	118	58	81	125
13C5-PFNA (surr.)	1	%	78	81	78	74
13C6-PFDA (surr.)	1	%	107	121	110	97
13C2-PFUnDA (surr.)	1	%	106	106	106	96
13C2-PFDoDA (surr.)	1	%	89	104	93	93
13C2-PFTeDA (surr.)	1	%	86	96	76	87
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	110	105	115	109
D3-N-MeFOSA (surr.)	1	%	122	39	114	130
D5-N-EtFOSA (surr.)	1	%	115	41	112	129
D7-N-MeFOSE (surr.)	1	%	115	84	111	112
D9-N-EtFOSE (surr.)	1	%	109	86	113	110
D5-N-EtFOSAA (surr.)	1	%	53	85	86	86
D3-N-MeFOSAA (surr.)	1	%	59	67	71	64

Client Sample ID			SX_OB_20220 318_16_04_SS Duplicate_EU F	SX_OB_20220 318_20_01_SS Primary_EUF	SX_OB_20220 319_00_09_SS Primary_EUF	SX_OB_20220 319_04_03_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-Ma39786	M22-Ma39787	M22-Ma39788	M22-Ma39789
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 19, 2022	Mar 19, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	84	79	81	90
18O2-PFHxS (surr.)	1	%	94	92	94	96
13C8-PFOS (surr.)	1	%	94	100	98	102
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	90	95	87	74
13C2-6:2 FTSA (surr.)	1	%	77	123	73	54
13C2-8:2 FTSA (surr.)	1	%	73	134	76	51
13C2-10:2 FTSA (surr.)	1	%	94	106	84	78
<b>PFASs Summations</b>						
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_OB_20220 318_08_10_SS TriPLICATE_EU F	SX_OB_20220 318_08_15_SS Primary_EUF	SX_OB_20220 318_12_07_SS Primary_EUF	SX_OB_20220 318_16_03_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-Ma39790	M22-Ma39791	M22-Ma39792	M22-Ma39793
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>AUS Leaching Procedure</b>						
Leachate Fluid <sup>C01</sup>		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	6.3	6.3	6.3	6.3
pH (off)	0.1	pH Units	9.8	9.8	9.7	10.0

Client Sample ID			SX_OB_20220 318_08_10_SS _TriPLICATE_EU F	SX_OB_20220 318_08_15_SS _Primary_EUF	SX_OB_20220 318_12_07_SS _Primary_EUF	SX_OB_20220 318_16_03_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-Ma39790	M22-Ma39791	M22-Ma39792	M22-Ma39793
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	101	104	102	96
13C5-PFPeA (surr.)	1	%	86	91	79	83
13C5-PFHxA (surr.)	1	%	74	75	71	72
13C4-PFHpA (surr.)	1	%	77	78	79	72
13C8-PFOA (surr.)	1	%	58	53	54	125
13C5-PFNA (surr.)	1	%	79	81	81	76
13C6-PFDA (surr.)	1	%	126	125	127	113
13C2-PFUnDA (surr.)	1	%	130	116	102	119
13C2-PFDoDA (surr.)	1	%	140	118	104	122
13C2-PFTeDA (surr.)	1	%	149	124	84	153
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	119	100	104	112
D3-N-MeFOSA (surr.)	1	%	167	49	89	184
D5-N-EtFOSA (surr.)	1	%	156	54	89	174
D7-N-MeFOSE (surr.)	1	%	121	80	85	123
D9-N-EtFOSE (surr.)	1	%	120	83	83	121
D5-N-EtFOSAA (surr.)	1	%	104	91	92	85
D3-N-MeFOSAA (surr.)	1	%	74	70	66	61
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			SX_OB_20220 318_08_10_SS _TriPLICATE_EU F	SX_OB_20220 318_08_15_SS _Primary_EUF	SX_OB_20220 318_12_07_SS _Primary_EUF	SX_OB_20220 318_16_03_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-Ma39790	M22-Ma39791	M22-Ma39792	M22-Ma39793
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	76	76	74	86
18O2-PFHxS (surr.)	1	%	91	94	87	98
13C8-PFOS (surr.)	1	%	107	102	107	99
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	84	74	86	88
13C2-6:2 FTSA (surr.)	1	%	78	105	96	55
13C2-8:2 FTSA (surr.)	1	%	82	144	104	65
13C2-10:2 FTSA (surr.)	1	%	129	113	102	105
<b>PFASs Summations</b>						
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_OB_20220 318_16_04_SS _Duplicate_EU F	SX_OB_20220 318_20_01_SS _Primary_EUF	SX_OB_20220 319_00_09_SS _Primary_EUF	SX_OB_20220 319_04_03_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-Ma39794	M22-Ma39795	M22-Ma39796	M22-Ma39797
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 19, 2022	Mar 19, 2022
Test/Reference	LOR	Unit				
<b>AUS Leaching Procedure</b>						
Leachate Fluid <sup>C01</sup>		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	6.3	6.3	6.3	6.3
pH (off)	0.1	pH Units	10.0	9.8	9.8	9.5
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			SX_OB_20220 318_16_04_SS Duplicate_EU F	SX_OB_20220 318_20_01_SS Primary_EUF	SX_OB_20220 319_00_09_SS Primary_EUF	SX_OB_20220 319_04_03_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-Ma39794	M22-Ma39795	M22-Ma39796	M22-Ma39797
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 19, 2022	Mar 19, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	93	96	96	99
13C5-PFPeA (surr.)	1	%	75	85	86	89
13C5-PFHxA (surr.)	1	%	68	64	72	73
13C4-PFHpA (surr.)	1	%	68	75	73	76
13C8-PFOA (surr.)	1	%	126	63	109	127
13C5-PFNA (surr.)	1	%	73	78	72	74
13C6-PFDA (surr.)	1	%	104	108	105	109
13C2-PFUnDA (surr.)	1	%	104	98	112	122
13C2-PFDoDA (surr.)	1	%	100	94	107	119
13C2-PFTeDA (surr.)	1	%	113	97	99	145
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	102	91	103	108
D3-N-MeFOSA (surr.)	1	%	72	34	125	123
D5-N-EtFOSA (surr.)	1	%	76	35	121	112
D7-N-MeFOSE (surr.)	1	%	91	66	104	108
D9-N-EtFOSE (surr.)	1	%	95	69	101	107
D5-N-EtFOSAA (surr.)	1	%	82	70	74	90
D3-N-MeFOSAA (surr.)	1	%	53	50	52	57
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	85	73	82	85
18O2-PFHxS (surr.)	1	%	88	93	85	94
13C8-PFOS (surr.)	1	%	97	93	97	106



Client Sample ID			SX_OB_20220 318_16_04_SS _Duplicate_EU F	SX_OB_20220 318_20_01_SS _Primary_EUF	SX_OB_20220 319_00_09_SS _Primary_EUF	SX_OB_20220 319_04_03_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-Ma39794	M22-Ma39795	M22-Ma39796	M22-Ma39797
Date Sampled			Mar 18, 2022	Mar 18, 2022	Mar 19, 2022	Mar 19, 2022
Test/Reference	LOR	Unit				
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	90	98	80	68
13C2-6:2 FTSA (surr.)	1	%	55	92	52	61
13C2-8:2 FTSA (surr.)	1	%	48	99	51	65
13C2-10:2 FTSA (surr.)	1	%	106	90	97	116
<b>PFASs Summations</b>						
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 22, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Mar 22, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Mar 22, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 22, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 22, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 22, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 22, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 21, 2022	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Mar 19, 2022 10:00 AM
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<b>Project Name:</b>	20220319045141-Eurofin-12	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	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_OB_20220318_08_10_S_S_Triplicate_EUF	Mar 18, 2022	8:10AM	Soil	M22-Ma39772		X	X	X
2	SX_OB_20220318_08_15_S_S_Primary_EUF	Mar 18, 2022	8:15AM	Soil	M22-Ma39773		X	X	X
3	SX_OB_20220318_12_07_S_S_Primary_EUF	Mar 18, 2022	12:07PM	Soil	M22-Ma39774		X	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
4	SX_OB_20220 318_16_03_S S_Primary_EU F	Mar 18, 2022	4:03PM	Soil	M22-Ma39775		X	X	X
5	SX_OB_20220 318_16_04_S S_Duplicate_E UF	Mar 18, 2022	4:04PM	Soil	M22-Ma39776		X	X	X
6	SX_OB_20220 318_16_26_S R_Rinsate_EU F	Mar 18, 2022	4:26PM	Water	M22-Ma39777			X	
7	SX_OB_20220 318_16_27_S	Mar 18, 2022	4:27PM	Water	M22-Ma39778			X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	B_Blank_EUF								
8	SX_OB_20220318_20_01_S_S_Primary_EUF	Mar 18, 2022	8:01PM	Soil	M22-Ma39779		X	X	X
9	SX_OB_20220319_00_09_S_S_Primary_EUF	Mar 19, 2022	12:09AM	Soil	M22-Ma39780		X	X	X
10	SX_OB_20220319_04_03_S_S_Primary_EUF	Mar 19, 2022	4:03AM	Soil	M22-Ma39781		X	X	X
11	SX_OB_20220	Mar 18, 2022	8:10AM	AUS Leachate	M22-Ma39782	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	318_08_10_S S_Triplicate_E UF			- pH 5.0					
12	SX_OB_20220 318_08_15_S S_Primary_EU F	Mar 18, 2022	8:15AM	AUS Leachate - pH 5.0	M22-Ma39783	X		X	
13	SX_OB_20220 318_12_07_S S_Primary_EU F	Mar 18, 2022	12:07PM	AUS Leachate - pH 5.0	M22-Ma39784	X		X	
14	SX_OB_20220 318_16_03_S S_Primary_EU	Mar 18, 2022	4:03PM	AUS Leachate - pH 5.0	M22-Ma39785	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	F								
15	SX_OB_20220318_16_04_S_S_Duplicate_EUF	Mar 18, 2022	4:04PM	AUS Leachate - pH 5.0	M22-Ma39786	X		X	
16	SX_OB_20220318_20_01_S_S_Primary_EUF	Mar 18, 2022	8:01PM	AUS Leachate - pH 5.0	M22-Ma39787	X		X	
17	SX_OB_20220319_00_09_S_S_Primary_EUF	Mar 19, 2022	12:09AM	AUS Leachate - pH 5.0	M22-Ma39788	X		X	
18	SX_OB_20220319_00_09_S_S_Primary_EUF	Mar 19, 2022	4:03AM	AUS Leachate	M22-Ma39789	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	319_04_03_S S_Primary_EU F			- pH 5.0					
19	SX_OB_20220 318_08_10_S S_Triplicate_E UF	Mar 18, 2022	8:10AM	AUS Leachate - Reagent Water	M22-Ma39790	X		X	
20	SX_OB_20220 318_08_15_S S_Primary_EU F	Mar 18, 2022	8:15AM	AUS Leachate - Reagent Water	M22-Ma39791	X		X	
21	SX_OB_20220 318_12_07_S S_Primary_EU	Mar 18, 2022	12:07PM	AUS Leachate - Reagent Water	M22-Ma39792	X		X	



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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	F								
22	SX_OB_20220318_16_03_S_S_Primary_EU_F	Mar 18, 2022	4:03PM	AUS Leachate - Reagent Water	M22-Ma39793	X		X	
23	SX_OB_20220318_16_04_S_S_Duplicate_EUF	Mar 18, 2022	4:04PM	AUS Leachate - Reagent Water	M22-Ma39794	X		X	
24	SX_OB_20220318_20_01_S_S_Primary_EU_F	Mar 18, 2022	8:01PM	AUS Leachate - Reagent Water	M22-Ma39795	X		X	
25	SX_OB_20220	Mar 19, 2022	12:09AM	AUS Leachate	M22-Ma39796	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	319_00_09_S S_Primary_EU F			- Reagent Water					
26	SX_OB_20220 319_04_03_S S_Primary_EU F	Mar 19, 2022	4:03AM	AUS Leachate - Reagent Water	M22-Ma39797	X		X	
<b>Test Counts</b>						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

<b>mg/kg:</b> milligrams per kilogram	<b>mg/L:</b> milligrams per litre	<b>µg/L:</b> micrograms per litre
<b>ppm:</b> parts per million	<b>ppb:</b> parts per billion	<b>%:</b> Percentage
<b>org/100 mL:</b> Organisms per 100 millilitres	<b>NTU:</b> Nephelometric Turbidity Units	<b>MPN/100 mL:</b> Most Probable Number of organisms per 100 millilitres

### Terms

<b>APHA</b>	American Public Health Association
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	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.
<b>NCP</b>	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.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>TBTO</b>	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.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 5.4
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	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
<b>Method Blank</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
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	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonamido substances</b>						
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	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
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	
<b>Method Blank</b>						
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
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	
<b>LCS - % Recovery</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA)	%	93		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	91		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	92		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	91		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	87		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	90		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	93		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	102		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	99		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	122		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	106		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>								
Perfluorooctane sulfonamide (FOSA)	%	98			50-150	Pass		
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	105			50-150	Pass		
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	90			50-150	Pass		
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	97			50-150	Pass		
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	97			50-150	Pass		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	91			50-150	Pass		
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	130			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	92			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	100			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	111			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	84			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	87			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	92			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	99			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	87			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	109			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	105			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	96			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	114			50-150	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>								
				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Ma39784	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
<b>Duplicate</b>								
<b>Perfluoroalkyl sulfonamido substances</b>								
				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ma39784	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma39784	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma39784	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma39784	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma39784	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass

<b>Duplicate</b>								
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1	Result 2	RPD		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma39784	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma39784	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
<b>Duplicate</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
<b>Duplicate</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)</b>				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma39784	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma39784	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass

**Comments**
**Sample Integrity**

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	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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## Automated Guideline Comparison Report

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

<b>Work Order</b>	: <b>EM2204841</b>	Page	: 1 of 27
Client	: <b>AGON ENVIRONMENTAL PTY LTD</b>	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	: 19-Mar-2022 09:38
Order number	: ----	Date Analysed	: 19-Mar-2022
C-O-C number	: 20220319050418-ALS-12	Date Issued	: 29-Mar-2022 10:46
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_20220318_08_08_ SS_Primary_ALS	EM2204841-001	Arsenic	EG005T	5	< 20 mg/kg	42 mg/kg
SX_OB_20220318_08_08_ SS_Primary_ALS	EM2204841-001	Nickel	EG005T	5	< 60 mg/kg	169 mg/kg
SX_OB_20220318_08_09_ SS_Duplicate_ALS	EM2204841-002	Arsenic	EG005T	5	< 20 mg/kg	43 mg/kg
SX_OB_20220318_08_09_ SS_Duplicate_ALS	EM2204841-002	Nickel	EG005T	5	< 60 mg/kg	171 mg/kg
SX_OB_20220318_12_11_ SS_Primary_ALS	EM2204841-005	pH (CaCl2)	EA001	0.1	> 4 pH Unit< 9 pH Unit	9.0 pH Unit
SX_OB_20220318_12_11_ SS_Primary_ALS	EM2204841-005	Arsenic	EG005T	5	< 20 mg/kg	38 mg/kg
SX_OB_20220318_12_11_ SS_Primary_ALS	EM2204841-005	Nickel	EG005T	5	< 60 mg/kg	140 mg/kg
SX_OB_20220318_16_06_ SS_Triplicate_ALS	EM2204841-006	pH (CaCl2)	EA001	0.1	> 4 pH Unit< 9 pH Unit	9.2 pH Unit
SX_OB_20220318_16_06_ SS_Triplicate_ALS	EM2204841-006	Arsenic	EG005T	5	< 20 mg/kg	42 mg/kg
SX_OB_20220318_16_06_ SS_Triplicate_ALS	EM2204841-006	Nickel	EG005T	5	< 60 mg/kg	141 mg/kg
SX_OB_20220318_16_12_ SS_Primary_ALS	EM2204841-007	Arsenic	EG005T	5	< 20 mg/kg	45 mg/kg
SX_OB_20220318_16_12_ SS_Primary_ALS	EM2204841-007	Nickel	EG005T	5	< 60 mg/kg	132 mg/kg
SX_OB_20220318_20_06_ SS_Primary_ALS	EM2204841-008	pH (CaCl2)	EA001	0.1	> 4 pH Unit< 9 pH Unit	9.0 pH Unit
SX_OB_20220318_20_06_ SS_Primary_ALS	EM2204841-008	Arsenic	EG005T	5	< 20 mg/kg	36 mg/kg
SX_OB_20220318_20_06_ SS_Primary_ALS	EM2204841-008	Nickel	EG005T	5	< 60 mg/kg	115 mg/kg
SX_OB_20220319_00_02_ SS_Primary_ALS	EM2204841-009	Arsenic	EG005T	5	< 20 mg/kg	44 mg/kg
SX_OB_20220319_00_02_ SS_Primary_ALS	EM2204841-009	Nickel	EG005T	5	< 60 mg/kg	152 mg/kg
SX_OB_20220319_04_07_ SS_Primary_ALS	EM2204841-010	Arsenic	EG005T	5	< 20 mg/kg	45 mg/kg
SX_OB_20220319_04_07_ SS_Primary_ALS	EM2204841-010	Nickel	EG005T	5	< 60 mg/kg	141 mg/kg

EPA Victoria Publication IWRG 621 (2009)



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

<i>Client Sample ID</i>	<i>ALS Sample ID</i>	<i>Compound</i>	<i>Method</i>	<i>LOR</i>	<i>Limits</i>	<i>Result</i>
<b>SX_OB_20220318_12_11_</b> <b>SS_Primary_ALS</b>	<b>EM2204841-005</b>	pH (CaCl2)	EA001	0.1	> 4 pH Unit< 9 pH Unit	<b>9.0 pH Unit</b>
<b>SX_OB_20220318_16_06_</b> <b>SS_Triplicate_ALS</b>	<b>EM2204841-006</b>	pH (CaCl2)	EA001	0.1	> 4 pH Unit< 9 pH Unit	<b>9.2 pH Unit</b>
<b>SX_OB_20220318_20_06_</b> <b>SS_Primary_ALS</b>	<b>EM2204841-008</b>	pH (CaCl2)	EA001	0.1	> 4 pH Unit< 9 pH Unit	<b>9.0 pH Unit</b>



## 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		SX_OB_20220 318_08_08_S S_Primary_AL S	SX_OB_20220 318_08_09_S S_Duplicate_ ALS	SX_OB_20220 318_12_11_S S_Primary_AL S	SX_OB_20220 318_16_06_S S_Triplicate_ ALS	SX_OB_20220 318_16_12_S S_Primary_AL S	
				Sampling date/time	Guideline						Guideline
				Lower Limit	Upper Limit						
						18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12	
						EM2204841-001 MU	EM2204841-002 MU	EM2204841-005 MU	EM2204841-006 MU	EM2204841-007 MU	
<b>EA001: pH in soil using 0.01M CaCl extract</b>											
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5	8.9 ± 0.1	8.9 ± 0.1	9.0 ± 0.1	9.2 ± 0.1	8.9 ± 0.1	
<b>EG005(ED093)T: Total Metals by ICP-AES</b>											
Arsenic	EG005T	5	mg/kg	----	2000	42 ± 6	43 ± 6	38 ± 5	42 ± 6	45 ± 6	
Cadmium	EG005T	1	mg/kg	----	400	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..	
Copper	EG005T	5	mg/kg	----	20000	56 ± 7	61 ± 7	50 ± 6	68 ± 8	54 ± 6	
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	169 ± 17	171 ± 17	140 ± 14	141 ± 14	132 ± 13	
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	98 ± 11	102 ± 11	83 ± 9	98 ± 11	89 ± 10	
<b>EG035T: Total Recoverable Mercury by FIMS</b>											
Mercury	EG035T	0.1	mg/kg	----	300	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>											
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..	
<b>EK026SF: Total CN by Segmented Flow Analyser</b>											
Total Cyanide	EK026SF	5	mg/kg	----	10000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..	
<b>EK040T: Fluoride Total</b>											
Fluoride	EK040T	100	mg/kg	----	40000	180 ± 40	220 ± 40	190 ± 40	100 ± 30	100 ± 30	
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>											
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 ..	
<b>EP074I: Volatile Halogenated Compounds</b>											
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 ..	
<b>EP075A: Phenolic Compounds (Halogenated)</b>											
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	318_08_08_S	318_08_09_S	318_12_11_S	318_16_06_S	318_16_12_S
						S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
						EM2204841-001 MU	EM2204841-002 MU	EM2204841-005 MU	EM2204841-006 MU	EM2204841-007 MU
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
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 ..
<b>EP075I: Organochlorine Pesticides</b>										
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 ..
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
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 318_08_08_S S_Primary_AL S	SX_OB_20220 318_08_09_S S_Duplicate_ ALS	SX_OB_20220 318_12_11_S S_Primary_AL S	SX_OB_20220 318_16_06_S S_Triplicate_ ALS	SX_OB_20220 318_16_12_S S_Primary_AL S
				Guideline	Guideline	18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
				Lower Limit	Upper Limit	EM2204841-001 MU	EM2204841-002 MU	EM2204841-005 MU	EM2204841-006 MU	EM2204841-007 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	8.9 ± 0.1	8.9 ± 0.1	9.0 ± 0.1	9.2 ± 0.1	8.9 ± 0.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	500	42 ± 6	43 ± 6	38 ± 5	42 ± 6	45 ± 6
Cadmium	EG005T	1	mg/kg	----	100	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..
Copper	EG005T	5	mg/kg	----	5000	56 ± 7	61 ± 7	50 ± 6	68 ± 8	54 ± 6
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	169 ± 17	171 ± 17	140 ± 14	141 ± 14	132 ± 13
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	98 ± 11	102 ± 11	83 ± 9	98 ± 11	89 ± 10
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	10000	180 ± 40	220 ± 40	190 ± 40	100 ± 30	100 ± 30
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
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 ..
<b>EP074I: Volatile Halogenated Compounds</b>										
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 ..
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
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	318_08_08_S	318_08_09_S	318_12_11_S	318_16_06_S	318_16_12_S
						S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
						EM2204841-001 MU	EM2204841-002 MU	EM2204841-005 MU	EM2204841-006 MU	EM2204841-007 MU
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	560	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
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 ..
<b>EP075I: Organochlorine Pesticides</b>										
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 ..
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
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	318_08_08_S	318_08_09_S	318_12_11_S	318_16_06_S	318_16_12_S
						S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
						EM2204841-001 MU	EM2204841-002 MU	EM2204841-005 MU	EM2204841-006 MU	EM2204841-007 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	8.9 ± 0.1	8.9 ± 0.1	9.0 ± 0.1	9.2 ± 0.1	8.9 ± 0.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	20	42 ± 6	43 ± 6	38 ± 5	42 ± 6	45 ± 6
Cadmium	EG005T	1	mg/kg	----	3	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..
Copper	EG005T	5	mg/kg	----	100	56 ± 7	61 ± 7	50 ± 6	68 ± 8	54 ± 6
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	169 ± 17	171 ± 17	140 ± 14	141 ± 14	132 ± 13
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	98 ± 11	102 ± 11	83 ± 9	98 ± 11	89 ± 10
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	450	180 ± 40	220 ± 40	190 ± 40	100 ± 30	100 ± 30
<b>EP066: Polychlorinated Biphenyls (PCB)</b>										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
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 ..
<b>EP074I: Volatile Halogenated Compounds</b>										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										



**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	318_08_08_S	318_08_09_S	318_12_11_S	318_16_06_S	318_16_12_S
						S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
						EM2204841-001 MU	EM2204841-002 MU	EM2204841-005 MU	EM2204841-006 MU	EM2204841-007 MU
<b>EP075A: Phenolic Compounds (Non-halogenated) - Continued</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	60	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
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 ..
<b>EP075I: Organochlorine Pesticides</b>										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
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	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Lower Limit	Upper Limit	318_20_06_S	319_00_02_S	319_04_07_S	318_08_08_S	318_08_09_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS
				Guideline	Guideline	18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	18-Mar-2022 08:08	18-Mar-2022 08:09
						EM2204841-008 MU	EM2204841-009 MU	EM2204841-010 MU	EM2204841-011 MU	EM2204841-012 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5	9.0 ± 0.1	8.8 ± 0.1	8.7 ± 0.1	----	----
<b>EG005(ED093T): Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	2000	36 ± 5	44 ± 6	45 ± 6	----	----
Cadmium	EG005T	1	mg/kg	----	400	<1 --	<1 --	<1 --	----	----
Copper	EG005T	5	mg/kg	----	20000	38 ± 5	57 ± 7	54 ± 6	----	----
Lead	EG005T	5	mg/kg	----	6000	<5 --	<5 --	<5 --	----	----
Molybdenum	EG005T	5	mg/kg	----	4000	<5 --	<5 --	<5 --	----	----
Nickel	EG005T	5	mg/kg	----	12000	115 ± 11	152 ± 15	141 ± 14	----	----
Selenium	EG005T	5	mg/kg	----	200	<5 --	<5 --	<5 --	----	----
Silver	EG005T	2	mg/kg	----	720	<2 --	<2 --	<2 --	----	----
Zinc	EG005T	5	mg/kg	----	140000	67 ± 8	102 ± 11	85 ± 10	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	300	<0.1 --	<0.1 --	<0.1 --	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000	<1.0 --	<1.0 --	<1.0 --	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	10000	<5 --	<5 --	<5 --	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	40000	100 ± 30	120 ± 30	<100 --	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
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 --	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
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 --	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	320	<1.00 --	<1.00 --	<1.00 --	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 --	<20 --	<20 --	----	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										



**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	318_20_06_S	319_00_02_S	319_04_07_S	318_08_08_S	318_08_09_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS
				Lower Limit	Upper Limit	18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	18-Mar-2022 08:08	18-Mar-2022 08:09
						EM2204841-008 MU	EM2204841-009 MU	EM2204841-010 MU	EM2204841-011 MU	EM2204841-012 MU
<b>EP075B: Polynuclear Aromatic Hydrocarbons - Continued</b>										
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	----	----
<b>EP075I: Organochlorine Pesticides</b>										
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	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
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 318_20_06_S S_Primary_AL S	SX_OB_20220 319_00_02_S S_Primary_AL S	SX_OB_20220 319_04_07_S S_Primary_AL S	SX_OB_20220 318_08_08_S S_Primary_AL S	SX_OB_20220 318_08_09_S S_Duplicate_ ALS
				Lower Limit	Upper Limit	18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	18-Mar-2022 08:08	18-Mar-2022 08:09
						EM2204841-008 MU	EM2204841-009 MU	EM2204841-010 MU	EM2204841-011 MU	EM2204841-012 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	9.0 ± 0.1	8.8 ± 0.1	8.7 ± 0.1	----	----
<b>EG005(ED093T): Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	500	36 ± 5	44 ± 6	45 ± 6	----	----
Cadmium	EG005T	1	mg/kg	----	100	<1 --	<1 --	<1 --	----	----
Copper	EG005T	5	mg/kg	----	5000	38 ± 5	57 ± 7	54 ± 6	----	----
Lead	EG005T	5	mg/kg	----	1500	<5 --	<5 --	<5 --	----	----
Molybdenum	EG005T	5	mg/kg	----	1000	<5 --	<5 --	<5 --	----	----
Nickel	EG005T	5	mg/kg	----	3000	115 ± 11	152 ± 15	141 ± 14	----	----
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	67 ± 8	102 ± 11	85 ± 10	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 --	<0.1 --	<0.1 --	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	<1.0 --	<1.0 --	<1.0 --	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 --	<5 --	<5 --	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	10000	100 ± 30	120 ± 30	<100 --	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
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 --	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
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 --	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	10	<1.00 --	<1.00 --	<1.00 --	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
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 318_20_06_S S_Primary_AL S	SX_OB_20220 319_00_02_S S_Primary_AL S	SX_OB_20220 319_04_07_S S_Primary_AL S	SX_OB_20220 318_08_08_S S_Primary_AL S	SX_OB_20220 318_08_09_S S_Duplicate_ ALS
				Guideline	Guideline	18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	18-Mar-2022 08:08	18-Mar-2022 08:09
				Lower Limit	Upper Limit	EM2204841-008 MU	EM2204841-009 MU	EM2204841-010 MU	EM2204841-011 MU	EM2204841-012 MU
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
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	----	----
<b>EP075I: Organochlorine Pesticides</b>										
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	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
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 318_20_06_S S_Primary_AL S	SX_OB_20220 319_00_02_S S_Primary_AL S	SX_OB_20220 319_04_07_S S_Primary_AL S	SX_OB_20220 318_08_08_S S_Primary_AL S	SX_OB_20220 318_08_09_S S_Duplicate_ ALS
				Guideline	Guideline	18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	18-Mar-2022 08:08	18-Mar-2022 08:09
				Lower Limit	Upper Limit	EM2204841-008 MU	EM2204841-009 MU	EM2204841-010 MU	EM2204841-011 MU	EM2204841-012 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	9.0 ± 0.1	8.8 ± 0.1	8.7 ± 0.1	----	----
<b>EG005(ED093T): Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	20	36 ± 5	44 ± 6	45 ± 6	----	----
Cadmium	EG005T	1	mg/kg	----	3	<1 --	<1 --	<1 --	----	----
Copper	EG005T	5	mg/kg	----	100	38 ± 5	57 ± 7	54 ± 6	----	----
Lead	EG005T	5	mg/kg	----	300	<5 --	<5 --	<5 --	----	----
Molybdenum	EG005T	5	mg/kg	----	40	<5 --	<5 --	<5 --	----	----
Nickel	EG005T	5	mg/kg	----	60	115 ± 11	152 ± 15	141 ± 14	----	----
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	67 ± 8	102 ± 11	85 ± 10	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 --	<0.1 --	<0.1 --	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	<1.0 --	<1.0 --	<1.0 --	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 --	<5 --	<5 --	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	450	100 ± 30	120 ± 30	<100 --	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 --	<0.1 --	<0.1 --	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
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 --	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 --	<0.50 --	<0.50 --	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 --	<1.00 --	<1.00 --	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
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	318_20_06_S	319_00_02_S	319_04_07_S	318_08_08_S	318_08_09_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS
				Lower Limit	Upper Limit	18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	18-Mar-2022 08:08	18-Mar-2022 08:09
						EM2204841-008 MU	EM2204841-009 MU	EM2204841-010 MU	EM2204841-011 MU	EM2204841-012 MU
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
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 ..	----	----
<b>EP075I: Organochlorine Pesticides</b>										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10 ..	<0.10 ..	<0.10 ..	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
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	318_12_11_S	318_16_06_S	318_16_12_S	318_20_06_S	319_00_02_S
						S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12	18-Mar-2022 20:06	19-Mar-2022 00:02
						EM2204841-013 MU	EM2204841-014 MU	EM2204841-015 MU	EM2204841-016 MU	EM2204841-017 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----
<b>EG005(ED093T): Total Metals by ICP-AES</b>										
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	----	----	----	----	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
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	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	----	----	----	----	----	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										















**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 319_04_07_S S_Primary_AL S	----	----	----	----
				Guideline	Guideline					
				Lower Limit	Upper Limit	19-Mar-2022 04:07	----	----	----	----
						EM2204841-018 MU				
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----
<b>EG005(ED093T): Total Metals by ICP-AES</b>										
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	----	----	----	----	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
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	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	----	----	----	----	----	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										













## QUALITY CONTROL REPORT

<b>Work Order</b>	: <b>EM2204843</b>	<b>Page</b>	: 1 of 32
<b>Client</b>	: <b>AGON ENVIRONMENTAL PTY LTD</b>	<b>Laboratory</b>	: Environmental Division Melbourne
<b>Contact</b>	: CRAIG TRIMBUR	<b>Contact</b>	: Bronwyn Sheen
<b>Address</b>	: D1.1 63-85 TURNER STREET PORT MELBOURNE 3207	<b>Address</b>	: 4 Westall Rd Springvale VIC Australia 3171
<b>Telephone</b>	: ----	<b>Telephone</b>	: +6138549 9600
<b>Project</b>	: JC0927	<b>Date Samples Received</b>	: 18-Mar-2022
<b>Order number</b>	: ----	<b>Date Analysis Commenced</b>	: 21-Mar-2022
<b>C-O-C number</b>	: 20220318042901-ALS-12	<b>Issue Date</b>	: 25-Mar-2022
<b>Sampler</b>	: ----		
<b>Site</b>	: 20220318042901-ALS-12		
<b>Quote number</b>	: EN/150/19 -WGTP -Bulk Sample Quote		
<b>No. of samples received</b>	: 18		
<b>No. of samples analysed</b>	: 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.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	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 Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4241584)</b>									
EM2204488-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	10	17	52.9	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	8	13	48.8	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	6	20.7	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	7	28.8	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	29	48.4	No Limit
EM2204531-005	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	56	54	2.8	0% - 20%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	10	10	0.0	No Limit
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	18	18	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	12	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	11	10	14.4	No Limit
<b>EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4241586)</b>									



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 (%)
<b>EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4241586) - continued</b>									
EM2204843-008	SX_OB_20220317_19_57_ SS_Primary_ALS	EG005T: Chromium	7440-47-3	2	mg/kg	100	94	6.9	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	189	176	7.0	0% - 20%
		EG005T: Copper	7440-50-8	5	mg/kg	61	56	8.3	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	105	95	9.9	0% - 20%
EM2204843-008	SX_OB_20220317_19_57_ SS_Primary_ALS	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	21	45	71.2	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	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	<10	<10	0.0	No Limit
EM2204901-006	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	10	13	26.9	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	72	74	2.3	0% - 20%
		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	28	29	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	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	29	31	5.8	No Limit
<b>EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4246393)</b>									
EM2204843-001	SX_IB_20220317_07_53_S S_Primary_ALS	EA001: pH (CaCl2)	----	0.1	pH Unit	7.8	7.8	0.0	0% - 20%
EM2204882-002	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	5.0	4.9	0.0	0% - 20%
<b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4244248)</b>									
EM2204843-001	SX_IB_20220317_07_53_S S_Primary_ALS	EA055: Moisture Content	----	0.1	%	32.3	32.6	1.0	0% - 20%
EM2204849-004	Anonymous	EA055: Moisture Content	----	0.1	%	15.3	17.6	13.6	0% - 50%
<b>EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4241583)</b>									
EM2204488-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2204531-005	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
<b>EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4241585)</b>									
EM2204843-008	SX_OB_20220317_19_57_ SS_Primary_ALS	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2204901-006	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 4244861)</b>									



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 (%)	
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 4244861) - continued</b>										
EM2204537-005	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
EM2204843-010	SX_OB_20220318_04_02_ SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
<b>EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4244762)</b>										
EM2204843-005	SX_OB_20220317_12_04_ SS_Primary_ALS	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<5	<5	0.0	No Limit	
EM2204682-001	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit	
<b>EK040T: Fluoride Total (QC Lot: 4244184)</b>										
EM2204537-005	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	90	70	19.5	No Limit	
EM2204843-009	SX_OB_20220318_00_02_ SS_Primary_ALS	EK040T: Fluoride	16984-48-8	40	mg/kg	170	230	32.4	No Limit	
<b>EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4244011)</b>										
EM2204843-001	SX_IB_20220317_07_53_S S_Primary_ALS	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
EM2204882-002	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4237607)</b>										
EM2204843-001	SX_IB_20220317_07_53_S S_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		
<b>EP074H: Naphthalene (QC Lot: 4237607)</b>										
EM2204843-001	SX_IB_20220317_07_53_S S_Primary_ALS	EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit	
<b>EP074I: Volatile Halogenated Compounds (QC Lot: 4237607)</b>										
EM2204843-001	SX_IB_20220317_07_53_S S_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	



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 (%)		
<b>EP074I: Volatile Halogenated Compounds (QC Lot: 4237607) - continued</b>											
EM2204843-001	SX_IB_20220317_07_53_S S_Primary_ALS	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		
<b>EP075A: Phenolic Compounds (Halogenated) (QC Lot: 4244009)</b>											
EM2204843-001	SX_IB_20220317_07_53_S S_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		
		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		
EM2204882-002	Anonymous	EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit		
		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				
EM2204882-002	Anonymous	EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
		<b>EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4244009)</b>									
		EM2204843-001	SX_IB_20220317_07_53_S S_Primary_ALS	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		



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 (%)
<b>EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4244009) - continued</b>									
EM2204843-001	SX_IB_20220317_07_53_S S_Primary_ALS	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	<20	<20	0.0	No Limit
		EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<20	<20	0.0	No Limit
EM2204882-002	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
		EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<5	<5	0.0	No Limit
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4244009)</b>									
EM2204843-001	SX_IB_20220317_07_53_S S_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
EM2204882-002	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





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 (%)
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4244009) - continued</b>									
EM2204882-002	Anonymous	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
<b>EP075I: Organochlorine Pesticides (QC Lot: 4244009)</b>									
EM2204843-001	SX_IB_20220317_07_53_S S_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		
EM2204882-002	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



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 (%)
<b>EP075I: Organochlorine Pesticides (QC Lot: 4244009) - continued</b>									
EM2204882-002	Anonymous	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		
<b>EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4237607)</b>									
EM2204843-001	SX_IB_20220317_07_53_S S_Primary_ALS	EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<20	<20	0.0	No Limit
<b>EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4244012)</b>									
EM2204843-001	SX_IB_20220317_07_53_S S_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
EM2204882-002	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
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4237607)</b>									
EM2204843-001	SX_IB_20220317_07_53_S S_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
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4244012)</b>									
EM2204843-001	SX_IB_20220317_07_53_S S_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
EM2204882-002	Anonymous	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
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4239608)</b>									
EM2204613-010	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4239608) - continued</b>									
EM2204613-010	Anonymous	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
EM2204843-008	SX_OB_20220317_19_57_ 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		
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4239608)</b>									
EM2204613-010	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EM2204843-008	SX_OB_20220317_19_57_ 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
		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
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4239608)</b>									
EM2204613-010	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4239608) - continued</b>									
EM2204613-010	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2204843-008	SX_OB_20220317_19_57_SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4239608)</b>									
EM2204613-010	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2204843-008	SX_OB_20220317_19_57_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



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 (%)
<b>EP231P: PFAS Sums (QC Lot: 4239608)</b>									
EM2204613-010	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
EM2204843-008	SX_OB_20220317_19_57_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 (%)
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4242599)</b>									
EM2204587-003	Anonymous	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
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4247300)</b>									
EM2204488-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2204531-005	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4247307)</b>									
EM2204488-008	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit



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 (%)
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4247307) - continued</b>									
EM2204488-008	Anonymous	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
EM2204531-018	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4242599)</b>									
EM2204587-003	Anonymous	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
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4247300)</b>									
EM2204488-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EM2204531-005	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4247300) - continued</b>									
EM2204531-005	Anonymous	EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4247307)</b>									
EM2204488-008	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EM2204531-018	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4242599)</b>									
EM2204587-003	Anonymous	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



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 (%)
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4242599) - continued</b>									
EM2204587-003	Anonymous	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
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4247300)</b>									
EM2204488-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2204531-005	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4247307)</b>									
EM2204488-008	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit





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 (%)
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4247307) - continued</b>									
EM2204488-008	Anonymous	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
EM2204531-018	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4242599)</b>									
EM2204587-003	Anonymous	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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4247300)</b>									
EM2204488-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2204531-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4247300) - continued</b>									
EM2204531-005	Anonymous	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4247307)</b>									
EM2204488-008	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2204531-018	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231P: PFAS Sums (QC Lot: 4242599)</b>									
EM2204587-003	Anonymous	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
<b>EP231P: PFAS Sums (QC Lot: 4247300)</b>									
EM2204488-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2204531-005	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
<b>EP231P: PFAS Sums (QC Lot: 4247307)</b>									
EM2204488-008	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2204531-018	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit

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 Work Order : EM2204843  
 Client : AGON ENVIRONMENTAL PTY LTD  
 Project : JC0927



Sub-Matrix: **WATER**

				<i>Laboratory Duplicate (DUP) Report</i>					
<i>Laboratory sample ID</i>	<i>Sample ID</i>	<i>Method: Compound</i>	<i>CAS Number</i>	<i>LOR</i>	<i>Unit</i>	<i>Original Result</i>	<i>Duplicate Result</i>	<i>RPD (%)</i>	<i>Acceptable RPD (%)</i>
<b>EP231P: PFAS Sums (QC Lot: 4247307) - continued</b>									
EM2204531-018	Anonymous	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 (%)		Acceptable Limits (%)	
						LCS	Low	High	
<b>EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4241584)</b>									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	85.0	70.0	130	
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	52.6	50.0	130	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	83.7	70.0	130	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	81.3	70.0	130	
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	80.3	70.0	130	
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	86.4	70.0	130	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	82.6	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	77.1	70.0	130	
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	75.5	70.0	130	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	75.3	70.0	130	
<b>EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4241586)</b>									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	100	70.0	130	
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	67.7	50.0	130	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	99.2	70.0	130	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	93.3	70.0	130	
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	94.7	70.0	130	
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	87.1	70.0	130	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	96.1	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	95.3	70.0	130	
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	90.0	70.0	130	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	76.7	70.0	130	
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4244349)</b>									
EN60-DIa-P: Final pH	----	0.1	pH Unit	6.0	----	----	----	----	
<b>EA001: pH in soil using 0.01M CaCl extract (QCLot: 4246393)</b>									
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	100	98.8	101	
				----	7 pH Unit	100	99.3	101	
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4241583)</b>									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	79.7	70.0	130	
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4241585)</b>									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	101	70.0	130	
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4244861)</b>									
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	88.1	70.0	130	



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
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4244762)</b>								
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	91.7	70.0	130
<b>EK040T: Fluoride Total (QCLot: 4244184)</b>								
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	75.4	75.2	110
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4244011)</b>								
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	125	67.4	136
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4237607)</b>								
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	91.7	69.2	116
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	92.9	67.7	116
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	92.6	66.6	115
EP074-UT: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	4.2 mg/kg	90.7	65.2	112
	106-42-3							
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	95.2	69.4	111
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	90.6	68.4	110
<b>EP074H: Naphthalene (QCLot: 4237607)</b>								
EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	0.6 mg/kg	86.9	72.3	114
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4237607)</b>								
EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	72.7	47.0	138
EP074-UT: 1.1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	91.8	57.6	125
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	91.4	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	92.2	70.3	112
EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	92.4	66.6	115
EP074-UT: 1.1.1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	93.4	64.4	122
EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	91.7	58.4	127
EP074-UT: 1.2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	101	72.9	114
EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	94.2	64.7	115
EP074-UT: 1.1.2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	94.8	72.6	116
EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	95.6	60.0	119
EP074-UT: 1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	91.8	71.8	116
EP074-UT: 1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	93.6	66.1	116
EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	85.4	39.8	128
EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	94.4	70.3	113
EP074-UT: 1.4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	92.6	62.6	113
EP074-UT: 1.2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	91.4	70.8	110
EP074-UT: 1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	94.8	48.4	120
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4244009)</b>								
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	114	74.5	126
EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	97.1	72.7	126



Sub-Matrix: SOIL

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	
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4244009) - continued</b>									
EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	98.5	73.5	132	
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	97.2	72.8	128	
EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	2 mg/kg	99.2	73.3	134	
EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	2 mg/kg	96.2	72.4	128	
EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	93.1	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	105	71.9	128	
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	87.2	54.4	135	
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4244009)</b>									
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	99.3	71.5	130	
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	102	73.4	129	
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	96.9	74.3	129	
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	94.7	70.9	133	
EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	97.2	71.8	132	
EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	72.2	41.0	156	
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	101	65.3	134	
EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	91.2	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	90.4	62.0	128	
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	78.6	34.5	137	
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4244009)</b>									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	96.6	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	95.2	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	97.4	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	103	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	99.1	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	99.2	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	98.1	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	102	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	101	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	101	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	102	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	101	65.1	130	
EP075-EM: Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	101	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	100	72.9	135	
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	100	71.3	134	
<b>EP075I: Organochlorine Pesticides (QCLot: 4244009)</b>									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	99.9	71.0	129	



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	
<b>EP075I: Organochlorine Pesticides (QCLot: 4244009) - continued</b>									
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	99.1	74.8	126	
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	97.9	75.7	130	
EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	2 mg/kg	96.6	70.8	130	
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	100	76.5	134	
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	95.7	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	99.0	76.8	130	
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	99.2	73.6	130	
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	101	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	97.7	75.3	131	
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	98.9	69.4	134	
EP075-EM: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	98.5	71.0	132	
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	96.3	78.0	133	
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	102	69.0	143	
EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	2 mg/kg	90.6	55.7	145	
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	99.0	71.4	135	
EP075-EM: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	101	74.8	134	
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	100	70.2	135	
EP075-EM: 4,4'-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	98.2	77.7	133	
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	97.5	63.6	135	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4237607)</b>									
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	98.9	61.1	119	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4244012)</b>									
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	760 mg/kg	101	74.4	129	
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	3270 mg/kg	94.4	81.0	123	
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1550 mg/kg	91.7	81.8	121	
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	94.4	70.0	130	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4237607)</b>									
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	99.6	59.9	119	
EP074-UT: C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTE X	10	mg/kg	<10	----	----	----	----	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4244012)</b>									
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1110 mg/kg	96.4	75.4	132	
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	4180 mg/kg	94.2	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	290 mg/kg	100	73.3	136	
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	95.0	70.0	130	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4239608)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	106	72.0	128	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	100	73.0	123	



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB)	Laboratory Control Spike (LCS) Report				
				Report	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
				Result		LCS	Low	High	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4239608) - continued</b>									
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	84.1	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	108	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	81.2	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	88.9	59.0	134	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4239608)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	89.1	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.1	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.6	69.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.8	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.6	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.0	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.9	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	98.4	69.0	133	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4239608)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.1	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	101	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	93.6	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	104	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	121	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.5	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.8	61.0	139	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4239608)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	99.1	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	107	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	98.1	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	84.8	70.0	130	
<b>EP231P: PFAS Sums (QCLot: 4239608)</b>									
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	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4242599)</b>									
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	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4247300)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	103	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	93.8	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	95.9	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	94.8	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	99.1	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	100	53.0	142	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4247307)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	104	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	109	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	95.2	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	103	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	96.7	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	105	53.0	142	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4242599)</b>									
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	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4247300)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	109	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	113	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	104	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	101	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	104	71.0	133	



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
						LCS	Low	High
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4247300) - continued</b>								
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	102	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	89.8	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	103	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	108	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	104	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	113	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4247307)</b>								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	97.1	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	105	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	107	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	107	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	119	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	99.6	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	103	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	104	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	96.9	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	94.7	71.0	132
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4242599)</b>								
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
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4247300)</b>								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	96.6	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	119	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	103	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	90.7	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	109	70.0	130



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	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4247300) - continued</b>									
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	108	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	96.0	61.0	135	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4247307)</b>									
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	
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	127	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	106	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	106	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	110	61.0	135	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4242599)</b>									
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	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4247300)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	102	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	111	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	111	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	86.9	70.0	130	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4247307)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	105	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	108	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	90.2	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	80.9	70.0	130	
<b>EP231P: PFAS Sums (QCLot: 4242599)</b>									
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	----	----	----	----	
<b>EP231P: PFAS Sums (QCLot: 4247300)</b>									
EP231X: Sum of PFAS	----	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
<b>EP231P: PFAS Sums (QCLot: 4247300) - continued</b>								
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	----	----	----	----
<b>EP231P: PFAS Sums (QCLot: 4247307)</b>								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

### Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery (%) MS	Acceptable Limits (%)	
					Low	High	
<b>EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4241584)</b>							
EM2204488-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	97.1	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	94.8	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	90.2	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	96.3	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	94.0	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	86.8	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	89.1	80.0	120
<b>EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4241586)</b>							
EM2204843-009	SX_OB_20220318_00_02_SS_Primary_ALS	EG005T: Arsenic	7440-38-2	50 mg/kg	85.3	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	116	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	82.4	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	116	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	115	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	92.1	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	104	80.0	120
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4241583)</b>							
EM2204488-002	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	92.2	76.0	116
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4241585)</b>							
EM2204843-009	SX_OB_20220318_00_02_SS_Primary_ALS	EG035T: Mercury	7439-97-6	0.5 mg/kg	114	76.0	116
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4244861)</b>							



Sub-Matrix: SOIL

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4244861) - continued</b>							
EM2204537-007	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	84.9	58.0	114
EM2204537-007	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	93.6	58.0	114
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4244762)</b>							
EM2204682-002	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	96.0	70.0	130
<b>EK040T: Fluoride Total (QCLot: 4244184)</b>							
EM2204537-007	Anonymous	EK040T: Fluoride	16984-48-8	400 mg/kg	70.4	70.0	130
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4244011)</b>							
EM2204843-002	SX_IB_20220317_07_53_SS_Duplicate_ALS	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	120	59.6	152
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4237607)</b>							
EM2204843-002	SX_IB_20220317_07_53_SS_Duplicate_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	84.7	53.7	130
		EP074-UT: Toluene	108-88-3	2 mg/kg	86.8	55.1	124
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4237607)</b>							
EM2204843-002	SX_IB_20220317_07_53_SS_Duplicate_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	82.4	38.4	145
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	79.0	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	80.7	55.5	122
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4244009)</b>							
EM2204690-067	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	128	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	103	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	95.0	10.0	144
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4244009)</b>							
EM2204690-067	Anonymous	EP075-EM: Phenol	108-95-2	3 mg/kg	111	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	95.2	34.2	129
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4244009)</b>							
EM2204690-067	Anonymous	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	# Not Determined	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	# Not Determined	37.8	152
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4237607)</b>							
EM2204843-002	SX_IB_20220317_07_53_SS_Duplicate_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	66.6	42.3	111
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4244012)</b>							
EM2204843-005	SX_OB_20220317_12_04_SS_Primary_ALS	EP071-EM: C10 - C14 Fraction	----	760 mg/kg	101	71.3	126
		EP071-EM: C15 - C28 Fraction	----	3270 mg/kg	94.1	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1550 mg/kg	91.3	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	5580 mg/kg	94.6	70.0	130
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4237607)</b>							



Sub-Matrix: SOIL

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4237607) - continued</b>							
EM2204843-002	SX_IB_20220317_07_53_SS_Duplicate_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	67.2	39.9	109
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4244012)</b>							
EM2204843-005	SX_OB_20220317_12_04_SS_Primary_ALS	EP071-EM: >C10 - C16 Fraction	----	1110 mg/kg	96.6	71.5	130
		EP071-EM: >C16 - C34 Fraction	----	4180 mg/kg	93.8	76.9	119
		EP071-EM: >C34 - C40 Fraction	----	290 mg/kg	99.1	65.3	139
		EP071-EM: >C10 - C40 Fraction (sum)	----	5580 mg/kg	95.0	70.0	130
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4239608)</b>							
EM2204670-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	112	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	90.0	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	78.2	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	101	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	104	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	88.4	59.0	134
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4239608)</b>							
EM2204670-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	84.4	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	94.6	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	95.3	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	101	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	97.5	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	98.8	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	90.0	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	102	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	96.5	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.00125 mg/kg	86.0	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	102	69.0	133
		<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4239608)</b>					
EM2204670-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	93.2	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	98.4	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	90.7	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	94.6	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	116	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	92.8	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	105	61.0	139



Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4239608)</b>							
EM2204670-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	92.2	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	90.0	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	93.0	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	77.9	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
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4242599)</b>							
EM2204587-004	Anonymous	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
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4247300)</b>							
EM2204488-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	102	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	99.4	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	98.5	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	101	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	101	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	97.0	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4247307)</b>							
EM2204488-009	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	96.7	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	96.4	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	100	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	105	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	92.6	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	72.1	53.0	142
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4242599)</b>							
EM2204587-004	Anonymous	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



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	Spike Recovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4242599) - continued</b>							
EM2204587-004	Anonymous	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
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4247300)</b>							
EM2204488-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	107	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	114	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	107	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	99.6	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	103	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	102	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	90.5	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	97.0	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	95.0	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	118	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4247307)</b>							
EM2204488-009	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	81.1	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	101	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	102	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	99.9	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	101	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	109	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	100	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	106	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	128	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	93.1	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	121	71.0	132
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4242599)</b>							
EM2204587-004	Anonymous	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





Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4242599) - continued</b>							
EM2204587-004	Anonymous	EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.5 µg/L	86.8	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4247300)</b>							
EM2204488-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	97.9	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	115	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	98.5	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	99.6	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	114	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	108	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	95.8	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4247307)</b>							
EM2204488-009	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	97.0	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	112	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	120	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	87.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	123	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	105	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	133	61.0	135
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4242599)</b>							
EM2204587-004	Anonymous	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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4247300)</b>							
EM2204488-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	110	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	123	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	118	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	93.6	70.0	130



Sub-Matrix: **WATER**

				<i>Matrix Spike (MS) Report</i>			
				<i>Spike</i>	<i>SpikeRecovery(%)</i>	<i>Acceptable Limits (%)</i>	
<i>Laboratory sample ID</i>	<i>Sample ID</i>	<i>Method: Compound</i>	<i>CAS Number</i>	<i>Concentration</i>	<i>MS</i>	<i>Low</i>	<i>High</i>
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4247307)</b>							
EM2204488-009	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	106	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	86.8	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	90.0	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	# 61.2	70.0	130

### CHAIN OF CUSTODY DOCUMENTATION

CLIENT: Agon Environmental  
 ADDRESS / OFFICE: Melbourne  
 PROJECT MANAGER (PM): Craig Trimbur  
 PROJECT ID: J09927  
 SITE: 20220318042001-ALS-12  
 RESULTS REQUIRED (Date): 5 days  
 P.O. NO.:  
 QUOTE NO.: ME-150-19 WGTP

SAMPLER:  
 MOBILE 1: +61 400 826 907 (Craig Trimbur)  
 MOBILE 2: +61 490 411 004 (David Lawson)  
 EMAIL REPORT TO: Labreports.TSI@agonenviro.com.au agonenviro.com.au agonenviro.com.au  
 motherhublabresults1@wqip.com.au  
 EMAIL INVOICE TO: (if different to report) Labreports.TSI@agonenviro.com.au agonenviro.com.au agonenviro.com.au

ALS ID	SAMPLE ID	MATRIX	DATE	Time	Container Information	Spill Sample Prep	P16 plus Cr	PFAS 28 Extended suite	ASLP PFAS - Extended Suite (Lab to determine pH)	D1 Leachate PFAS - Extended Suite	Notes
1	SX_IB_20220317_07_53_SS_Pr- Inny ALS	S	17.03.2022	7:53	Bucket	1	X	X	X	X	
2	SX_IB_20220317_07_53_SS_D uplicate ALS	S	17.03.2022	7:53	Bucket	1	X	X	X	X	
3	SX_IB_20220317_08_34_SRR_R Insite ALS	W	17.03.2022	8:34	Bottle	1	X				
4	SX_IB_20220317_08_36_SS_BI ink ALS	W	17.03.2022	8:36	Bottle	1		X			
5	SX_OB_20220317_12_04_SS- Primary ALS	S	17.03.2022	12:04	Bucket	1	X	X	X	X	
6	SX_OB_20220317_15_54_SS- Primary ALS	S	17.03.2022	15:54	Bucket	1	X	X	X	X	
7	SX_OB_20220317_16_03_SS- Triplate ALS	S	17.03.2022	16:03	Bucket	1	X	X	X	X	
8	SX_OB_20220317_19_57_SS- Primary ALS	S	17.03.2022	19:57	Bucket	1	X	X	X	X	
9	SX_OB_20220318_00_02_SS- Primary ALS	S	18.03.2022	0:02	Bucket	1	X	X	X	X	
10	SX_OB_20220318_04_02_SS- Primary ALS	S	18.03.2022	4:02	Bucket	1	X	X	X	X	

RELINQUISHED BY: Name: Burdson Date: 18.3.2022

RECEIVED BY: Name: \_\_\_\_\_ Date: \_\_\_\_\_

Method of shipment: \_\_\_\_\_

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




Environmental Division  
 Melbourne  
 Work Order Reference  
**EM2204843**



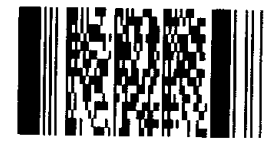
Telephone: +61-3-8549 9600

Received: 19/3, 11:20 Carrier: country  
 C/Note: \_\_\_\_\_  
 Temp: 15-15 °C Seal: V / D  
 Ice / Icebricks / D  
Tran



CHAIN OF CUSTODY DOCUMENTATION										 Australian Laboratory Services Pty Ltd										
CLIENT: Agon Environmental					SAMPLER: Brandon and Toby - AGON															
ADDRESS / OFFICE: Melbourne					MOBILE 1: +61 400 826 907 (Craig Trimbur)															
PROJECT MANAGER (PM): Craig Trimbur					MOBILE 2: +61 490 411 004 (David Lawson)															
PROJECT ID: JC0927					EMAIL REPORT TO: Labreports.TST@agonenviro.com.au agonenvironmental@esdat.com.au															
SITE: 20220319050418-ALS-12					P.O. NO.:					motherhublabresults1@wgtp.com.au										
RESULTS REQUIRED (Date): 3 days					QUOTE NO.: ME-150-19 WGTP					EMAIL INVOICE TO: (if different to report) Labreports.TST@agonenviro.com.au agonenvironmental@esdat.com.au										
ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)										URGENT										
FOR LABORATORY USE ONLY COOLER SEAL (note appropriate) TEMPERATURE SAMPLE TEMPERATURE QUICKED Yes No					COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:										Notes:					
SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION															
ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles	Spoil Sample Prep	P16 plus Cr	PFAS 28 Extended suite						ASLP PFAS - Extended Suite (Lab to determine pH)	DI Leachate PFAS - Extended Suite				
11	1	SX_OB_20220318_08_08_SS_Pri mary_ALS	S	18.03.2022	8:08	Bucket	1	x	x	x	x	x								
12	2	SX_OB_20220318_08_09_SS_Dup licate_ALS	S	18.03.2022	8:09	Bucket	1	x	x	x	x	x								
	3	SX_OB_20220318_08_40_SR_Rin sate_ALS	W	18.03.2022	8:40	Bottle	1			x										
	4	SX_OB_20220318_08_41_SB_Bla nk_ALS	W	18.03.2022	8:41	Bottle	1			x										
13	5	SX_OB_20220318_12_11_SS_Pri mary_ALS	S	18.03.2022	12:11	Bucket	1	x	x	x	x	x								
14	6	SX_OB_20220318_16_06_SS_Trip licate_ALS	S	18.03.2022	16:06	Bucket	1	x	x	x	x	x								
15	7	SX_OB_20220318_16_12_SS_Pri mary_ALS	S	18.03.2022	16:12	Bucket	1	x	x	x	x	x								
16	8	SX_OB_20220318_20_06_SS_Pri mary_ALS	S	18.03.2022	20:06	Bucket	1	x	x	x	x	x								
17	9	SX_OB_20220319_00_02_SS_Pri mary_ALS	S	19.03.2022	0:02	Bucket	1	x	x	x	x	x								
18	10	SX_OB_20220319_04_07_SS_Pri mary_ALS	S	19.03.2022	4:07	Bucket	1	x	x	x	x	x								
RELINQUISHED BY:					RECEIVED BY:					METHOD OF SHIPMENT:										
Name: Emma			Date: 19/03/22		Name: Scott			Date: 19/3/22		Con' Note No:										
Of: EP Risk			Time: 08:23 am		Of: ALS			Time: 9:38												
Name:			Date:		Name:			Date:		Transport Co:										
Of:			Time:		Of:			Time:												
<p><b>Water Container Codes:</b> P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved;</p> <p>V = VOA Vial HCl Preserved; VS = VOA Vial Sulphuric Preserved; SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;</p> <p>Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.</p>																				

Environmental Division  
Melbourne  
Work Order Reference  
**EM2204841**



Telephone : + 61-3-8549 9600

## Automated Guideline Comparison Report

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

<b>Work Order</b>	: <b>EM2204843</b>	Page	: 1 of 26
Client	: <b>AGON ENVIRONMENTAL PTY LTD</b>	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	: 18-Mar-2022 11:40
Order number	: ----	Date Analysed	: 21-Mar-2022
C-O-C number	: 20220318042901-ALS-12	Date Issued	: 25-Mar-2022 16:51
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_IB_20220317_07_53_S S_Primary_ALS	EM2204843-001	Nickel	EG005T	5	< 60 mg/kg	132 mg/kg
SX_IB_20220317_07_53_S S_Duplicate_ALS	EM2204843-002	Nickel	EG005T	5	< 60 mg/kg	118 mg/kg
SX_OB_20220317_12_04_ SS_Primary_ALS	EM2204843-005	Arsenic	EG005T	5	< 20 mg/kg	22 mg/kg
SX_OB_20220317_12_04_ SS_Primary_ALS	EM2204843-005	Nickel	EG005T	5	< 60 mg/kg	83 mg/kg
SX_OB_20220317_15_54_ SS_Primary_ALS	EM2204843-006	Arsenic	EG005T	5	< 20 mg/kg	24 mg/kg
SX_OB_20220317_15_54_ SS_Primary_ALS	EM2204843-006	Nickel	EG005T	5	< 60 mg/kg	79 mg/kg
SX_OB_20220317_16_03_ SS_Triplicate_ALS	EM2204843-007	Arsenic	EG005T	5	< 20 mg/kg	28 mg/kg
SX_OB_20220317_16_03_ SS_Triplicate_ALS	EM2204843-007	Nickel	EG005T	5	< 60 mg/kg	119 mg/kg
SX_OB_20220317_19_57_ SS_Primary_ALS	EM2204843-008	Arsenic	EG005T	5	< 20 mg/kg	21 mg/kg
SX_OB_20220317_19_57_ SS_Primary_ALS	EM2204843-008	Nickel	EG005T	5	< 60 mg/kg	189 mg/kg
SX_OB_20220318_00_02_ SS_Primary_ALS	EM2204843-009	Arsenic	EG005T	5	< 20 mg/kg	41 mg/kg
SX_OB_20220318_00_02_ SS_Primary_ALS	EM2204843-009	Nickel	EG005T	5	< 60 mg/kg	156 mg/kg
SX_OB_20220318_04_02_ SS_Primary_ALS	EM2204843-010	Arsenic	EG005T	5	< 20 mg/kg	42 mg/kg
SX_OB_20220318_04_02_ SS_Primary_ALS	EM2204843-010	Nickel	EG005T	5	< 60 mg/kg	129 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		SX_IB_20220 317_07_53_S S_Primary_AL S	SX_IB_20220 317_07_53_S S_Duplicate_ ALS	SX_OB_20220 317_12_04_S S_Primary_AL S	SX_OB_20220 317_15_54_S S_Primary_AL S	SX_OB_20220 317_16_03_S S_Triplicate_ ALS
				Lower Limit	Upper Limit					
				Guideline	Guideline					
						17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
						EM2204843-001 MU	EM2204843-002 MU	EM2204843-005 MU	EM2204843-006 MU	EM2204843-007 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5	7.8 ± 0.1	7.8 ± 0.1	8.7 ± 0.1	8.8 ± 0.1	8.7 ± 0.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	2000	18 ± 3	17 ± 3	22 ± 3	24 ± 4	28 ± 4
Cadmium	EG005T	1	mg/kg	----	400	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..
Copper	EG005T	5	mg/kg	----	20000	48 ± 6	43 ± 5	31 ± 4	29 ± 4	38 ± 5
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	132 ± 13	118 ± 12	83 ± 8	79 ± 8	119 ± 12
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	72 ± 8	50 ± 6	44 ± 6	74 ± 8
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	300	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	10000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	40000	310 ± 60	190 ± 40	<100 ..	120 ± 30	180 ± 40
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
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 ..
<b>EP074I: Volatile Halogenated Compounds</b>										
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 ..
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
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_IB_20220 317_07_53_S S_Primary_AL S	SX_IB_20220 317_07_53_S S_Duplicate_ ALS	SX_OB_20220 317_12_04_S S_Primary_AL S	SX_OB_20220 317_15_54_S S_Primary_AL S	SX_OB_20220 317_16_03_S S_Triplicate_ ALS
				Guideline	Guideline					
				Lower Limit	Upper Limit					
						17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
						EM2204843-001 MU	EM2204843-002 MU	EM2204843-005 MU	EM2204843-006 MU	EM2204843-007 MU
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
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 ..
<b>EP075I: Organochlorine Pesticides</b>										
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 ..
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
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_IB_20220 317_07_53_S S_Primary_AL S	SX_IB_20220 317_07_53_S S_Duplicate_ ALS	SX_OB_20220 317_12_04_S S_Primary_AL S	SX_OB_20220 317_15_54_S S_Primary_AL S	SX_OB_20220 317_16_03_S S_Triplicate_ ALS
				Guideline	Guideline					
				Lower Limit	Upper Limit					
						17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
						EM2204843-001 MU	EM2204843-002 MU	EM2204843-005 MU	EM2204843-006 MU	EM2204843-007 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.8 ±0.1	7.8 ±0.1	8.7 ±0.1	8.8 ±0.1	8.7 ±0.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	500	18 ±3	17 ±3	22 ±3	24 ±4	28 ±4
Cadmium	EG005T	1	mg/kg	----	100	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..
Copper	EG005T	5	mg/kg	----	5000	48 ±6	43 ±5	31 ±4	29 ±4	38 ±5
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	132 ±13	118 ±12	83 ±8	79 ±8	119 ±12
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	72 ±8	50 ±6	44 ±6	74 ±8
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	10000	310 ±60	190 ±40	<100 ..	120 ±30	180 ±40
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
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 ..
<b>EP074I: Volatile Halogenated Compounds</b>										
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 ..
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
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_IB_20220 317_07_53_S S_Primary_AL S	SX_IB_20220 317_07_53_S S_Duplicate_ ALS	SX_OB_20220 317_12_04_S S_Primary_AL S	SX_OB_20220 317_15_54_S S_Primary_AL S	SX_OB_20220 317_16_03_S S_Triplicate_ ALS
				Guideline	Guideline					
				Lower Limit	Upper Limit					
						17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
						EM2204843-001 MU	EM2204843-002 MU	EM2204843-005 MU	EM2204843-006 MU	EM2204843-007 MU
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	560	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
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 ..
<b>EP075I: Organochlorine Pesticides</b>										
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 ..
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
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_IB_20220 317_07_53_S S_Primary_AL S	SX_IB_20220 317_07_53_S S_Duplicate_ ALS	SX_OB_20220 317_12_04_S S_Primary_AL S	SX_OB_20220 317_15_54_S S_Primary_AL S	SX_OB_20220 317_16_03_S S_Triplicate_ ALS
				Guideline	Guideline	17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
				Lower Limit	Upper Limit	EM2204843-001 MU	EM2204843-002 MU	EM2204843-005 MU	EM2204843-006 MU	EM2204843-007 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.8 ±0.1	7.8 ±0.1	8.7 ±0.1	8.8 ±0.1	8.7 ±0.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	20	18 ±3	17 ±3	22 ±3	24 ±4	28 ±4
Cadmium	EG005T	1	mg/kg	----	3	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..
Copper	EG005T	5	mg/kg	----	100	48 ±6	43 ±5	31 ±4	29 ±4	38 ±5
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	132 ±13	118 ±12	83 ±8	79 ±8	119 ±12
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	72 ±8	50 ±6	44 ±6	74 ±8
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	450	310 ±60	190 ±40	<100 ..	120 ±30	180 ±40
<b>EP066: Polychlorinated Biphenyls (PCB)</b>										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
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 ..
<b>EP074I: Volatile Halogenated Compounds</b>										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										



**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_IB_20220 317_07_53_S S_Primary_AL S	SX_IB_20220 317_07_53_S S_Duplicate_ ALS	SX_OB_20220 317_12_04_S S_Primary_AL S	SX_OB_20220 317_15_54_S S_Primary_AL S	SX_OB_20220 317_16_03_S S_Triplicate_ ALS
				Guideline	Guideline					
				Lower Limit	Upper Limit					
						17-Mar-2022 07:53	17-Mar-2022 07:53	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03
						EM2204843-001 MU	EM2204843-002 MU	EM2204843-005 MU	EM2204843-006 MU	EM2204843-007 MU
<b>EP075A: Phenolic Compounds (Non-halogenated) - Continued</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	60	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
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 ..
<b>EP075I: Organochlorine Pesticides</b>										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
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	SX_OB_20220	SX_OB_20220	SX_IB_20220	SX_IB_20220
				Lower Limit	Upper Limit	317_19_57_S	318_00_02_S	318_04_02_S	317_07_53_S	317_07_53_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS
						17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	17-Mar-2022 07:53	17-Mar-2022 07:53
						EM2204843-008 MU	EM2204843-009 MU	EM2204843-010 MU	EM2204843-011 MU	EM2204843-012 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5	8.8 ± 0.1	8.9 ± 0.1	8.8 ± 0.1	----	----
<b>EG005(ED093T): Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	2000	21 ± 3	41 ± 5	42 ± 6	----	----
Cadmium	EG005T	1	mg/kg	----	400	<1 --	<1 --	<1 --	----	----
Copper	EG005T	5	mg/kg	----	20000	61 ± 8	56 ± 7	52 ± 6	----	----
Lead	EG005T	5	mg/kg	----	6000	<5 --	<5 --	<5 --	----	----
Molybdenum	EG005T	5	mg/kg	----	4000	<5 --	<5 --	<5 --	----	----
Nickel	EG005T	5	mg/kg	----	12000	189 ± 18	156 ± 15	129 ± 13	----	----
Selenium	EG005T	5	mg/kg	----	200	<5 --	<5 --	<5 --	----	----
Silver	EG005T	2	mg/kg	----	720	<2 --	<2 --	<2 --	----	----
Zinc	EG005T	5	mg/kg	----	140000	105 ± 12	94 ± 10	91 ± 10	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	300	<0.1 --	<0.1 --	<0.1 --	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000	<1.0 --	<1.0 --	<1.0 --	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	10000	<5 --	<5 --	<5 --	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	40000	180 ± 40	170 ± 40	110 ± 30	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
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 --	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
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 --	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	320	<1.00 --	<1.00 --	<1.00 --	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 --	<20 --	<20 --	----	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										



**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_IB_20220	SX_IB_20220
				Guideline	Guideline	317_19_57_S	318_00_02_S	318_04_02_S	317_07_53_S	317_07_53_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS
				Lower Limit	Upper Limit	17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	17-Mar-2022 07:53	17-Mar-2022 07:53
						EM2204843-008 MU	EM2204843-009 MU	EM2204843-010 MU	EM2204843-011 MU	EM2204843-012 MU
<b>EP075B: Polynuclear Aromatic Hydrocarbons - Continued</b>										
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 ..	----	----
<b>EP075I: Organochlorine Pesticides</b>										
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 ..	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
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	SX_OB_20220	SX_OB_20220	SX_IB_20220	SX_IB_20220
				Lower Limit	Upper Limit	317_19_57_S	318_00_02_S	318_04_02_S	317_07_53_S	317_07_53_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS
				Guideline	Guideline	17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	17-Mar-2022 07:53	17-Mar-2022 07:53
						EM2204843-008 MU	EM2204843-009 MU	EM2204843-010 MU	EM2204843-011 MU	EM2204843-012 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	8.8 ± 0.1	8.9 ± 0.1	8.8 ± 0.1	----	----
<b>EG005(ED093T): Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	500	21 ± 3	41 ± 5	42 ± 6	----	----
Cadmium	EG005T	1	mg/kg	----	100	<1 --	<1 --	<1 --	----	----
Copper	EG005T	5	mg/kg	----	5000	61 ± 8	56 ± 7	52 ± 6	----	----
Lead	EG005T	5	mg/kg	----	1500	<5 --	<5 --	<5 --	----	----
Molybdenum	EG005T	5	mg/kg	----	1000	<5 --	<5 --	<5 --	----	----
Nickel	EG005T	5	mg/kg	----	3000	189 ± 18	156 ± 15	129 ± 13	----	----
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	105 ± 12	94 ± 10	91 ± 10	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 --	<0.1 --	<0.1 --	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	<1.0 --	<1.0 --	<1.0 --	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 --	<5 --	<5 --	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	10000	180 ± 40	170 ± 40	110 ± 30	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
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 --	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
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 --	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	10	<1.00 --	<1.00 --	<1.00 --	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
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	SX_OB_20220	SX_OB_20220	SX_IB_20220	SX_IB_20220
				Guideline	Guideline	317_19_57_S	318_00_02_S	318_04_02_S	317_07_53_S	317_07_53_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS
				Lower Limit	Upper Limit	17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	17-Mar-2022 07:53	17-Mar-2022 07:53
						EM2204843-008 MU	EM2204843-009 MU	EM2204843-010 MU	EM2204843-011 MU	EM2204843-012 MU
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
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	----	----
<b>EP075I: Organochlorine Pesticides</b>										
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	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
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	SX_OB_20220	SX_OB_20220	SX_IB_20220	SX_IB_20220
				Lower Limit	Upper Limit	317_19_57_S	318_00_02_S	318_04_02_S	317_07_53_S	317_07_53_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS
				Guideline	Guideline	17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	17-Mar-2022 07:53	17-Mar-2022 07:53
						EM2204843-008 MU	EM2204843-009 MU	EM2204843-010 MU	EM2204843-011 MU	EM2204843-012 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	8.8 ± 0.1	8.9 ± 0.1	8.8 ± 0.1	----	----
<b>EG005(ED093T): Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	20	21 ± 3	41 ± 5	42 ± 6	----	----
Cadmium	EG005T	1	mg/kg	----	3	<1 --	<1 --	<1 --	----	----
Copper	EG005T	5	mg/kg	----	100	61 ± 8	56 ± 7	52 ± 6	----	----
Lead	EG005T	5	mg/kg	----	300	<5 --	<5 --	<5 --	----	----
Molybdenum	EG005T	5	mg/kg	----	40	<5 --	<5 --	<5 --	----	----
Nickel	EG005T	5	mg/kg	----	60	189 ± 18	156 ± 15	129 ± 13	----	----
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	105 ± 12	94 ± 10	91 ± 10	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 --	<0.1 --	<0.1 --	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	<1.0 --	<1.0 --	<1.0 --	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 --	<5 --	<5 --	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	450	180 ± 40	170 ± 40	110 ± 30	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 --	<0.1 --	<0.1 --	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
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 --	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 --	<0.50 --	<0.50 --	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 --	<1.00 --	<1.00 --	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
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_IB_20220	SX_IB_20220
				Guideline	Guideline	317_19_57_S	318_00_02_S	318_04_02_S	317_07_53_S	317_07_53_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS
				Lower Limit	Upper Limit	17-Mar-2022 19:57	18-Mar-2022 00:02	18-Mar-2022 16:02	17-Mar-2022 07:53	17-Mar-2022 07:53
						EM2204843-008 MU	EM2204843-009 MU	EM2204843-010 MU	EM2204843-011 MU	EM2204843-012 MU
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
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 ..	----	----
<b>EP075I: Organochlorine Pesticides</b>										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10 ..	<0.10 ..	<0.10 ..	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
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	317_12_04_S	317_15_54_S	317_16_03_S	317_19_57_S	318_00_02_S
						S_Primary_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	17-Mar-2022 12:04	17-Mar-2022 15:54	17-Mar-2022 16:03	17-Mar-2022 19:57	18-Mar-2022 00:02
						EM2204843-013 MU	EM2204843-014 MU	EM2204843-015 MU	EM2204843-016 MU	EM2204843-017 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
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	----	----	----	----	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
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	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	----	----	----	----	----	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										















**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 318_04_02_S S_Primary_AL S	----	----	----	----
				Guideline	Guideline					
				Lower Limit	Upper Limit	18-Mar-2022 04:02	----	----	----	----
						EM2204843-018 MU				
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----
<b>EG005(ED093T): Total Metals by ICP-AES</b>										
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	----	----	----	----	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
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	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	----	----	----	----	----	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										











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 **872697-W**  
Project name **20220319045141-Eurofin-12**  
Project ID **JC0927**  
Received Date **Mar 19, 2022**

Client Sample ID			SX_OB_20220 318_16_26_SR _Rinsate_EUF	SX_OB_20220 318_16_27_SB _Blank_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22-Ma39777	M22-Ma39778
Date Sampled			Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit		
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	106	111
13C5-PFPeA (surr.)	1	%	113	115
13C5-PFHxA (surr.)	1	%	89	95
13C4-PFHpA (surr.)	1	%	84	89
13C8-PFOA (surr.)	1	%	119	132
13C5-PFNA (surr.)	1	%	74	74
13C6-PFDA (surr.)	1	%	102	99
13C2-PFUnDA (surr.)	1	%	84	91
13C2-PFDoDA (surr.)	1	%	84	95
13C2-PFTeDA (surr.)	1	%	60	83
<b>Perfluoroalkyl sulfonamido substances</b>				
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	69	72
D3-N-MeFOSA (surr.)	1	%	15	13

Client Sample ID			SX_OB_20220 318_16_26_SR _Rinsate_EUF	SX_OB_20220 318_16_27_SB _Blank_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22-Ma39777	M22-Ma39778
Date Sampled			Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit		
<b>Perfluoroalkyl sulfonamido substances</b>				
D5-N-EtFOSA (surr.)	1	%	15	14
D7-N-MeFOSE (surr.)	1	%	69	81
D9-N-EtFOSE (surr.)	1	%	73	86
D5-N-EtFOSAA (surr.)	1	%	76	92
D3-N-MeFOSAA (surr.)	1	%	64	62
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>				
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	90	96
18O2-PFHxS (surr.)	1	%	87	98
13C8-PFOS (surr.)	1	%	85	98
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	78	85
13C2-6:2 FTSA (surr.)	1	%	97	103
13C2-8:2 FTSA (surr.)	1	%	76	86
13C2-10:2 FTSA (surr.)	1	%	104	119
<b>PFASs Summations</b>				
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 21, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Mar 21, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Mar 21, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Mar 21, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Mar 21, 2022	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Fullarton  
SA 5063  
  
**Project Name:** 20220319045141-Eurofin-12  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 872697  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Mar 19, 2022 10:00 AM  
**Due:** Mar 24, 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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_OB_20220318_08_10_S_S_Triplicate_EUF	Mar 18, 2022	8:10AM	Soil	M22-Ma39772		X	X	X
2	SX_OB_20220318_08_15_S_S_Primary_EUF	Mar 18, 2022	8:15AM	Soil	M22-Ma39773		X	X	X
3	SX_OB_20220318_12_07_S_S_Primary_EUF	Mar 18, 2022	12:07PM	Soil	M22-Ma39774		X	X	X

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<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
4	SX_OB_20220 318_16_03_S S_Primary_EU F	Mar 18, 2022	4:03PM	Soil	M22-Ma39775		X	X	X
5	SX_OB_20220 318_16_04_S S_Duplicate_E UF	Mar 18, 2022	4:04PM	Soil	M22-Ma39776		X	X	X
6	SX_OB_20220 318_16_26_S R_Rinsate_EU F	Mar 18, 2022	4:26PM	Water	M22-Ma39777			X	
7	SX_OB_20220 318_16_27_S	Mar 18, 2022	4:27PM	Water	M22-Ma39778			X	

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<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	B_Blank_EUF								
8	SX_OB_20220318_20_01_S_S_Primary_EUF	Mar 18, 2022	8:01PM	Soil	M22-Ma39779		X	X	X
9	SX_OB_20220319_00_09_S_S_Primary_EUF	Mar 19, 2022	12:09AM	Soil	M22-Ma39780		X	X	X
10	SX_OB_20220319_04_03_S_S_Primary_EUF	Mar 19, 2022	4:03AM	Soil	M22-Ma39781		X	X	X
11	SX_OB_20220	Mar 18, 2022	8:10AM	AUS Leachate	M22-Ma39782	X		X	

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<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	318_08_10_S S_Triplicate_E UF			- pH 5.0					
12	SX_OB_20220 318_08_15_S S_Primary_EU F	Mar 18, 2022	8:15AM	AUS Leachate - pH 5.0	M22-Ma39783	X		X	
13	SX_OB_20220 318_12_07_S S_Primary_EU F	Mar 18, 2022	12:07PM	AUS Leachate - pH 5.0	M22-Ma39784	X		X	
14	SX_OB_20220 318_16_03_S S_Primary_EU	Mar 18, 2022	4:03PM	AUS Leachate - pH 5.0	M22-Ma39785	X		X	

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<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	F								
15	SX_OB_20220318_16_04_S_S_Duplicate_EUF	Mar 18, 2022	4:04PM	AUS Leachate - pH 5.0	M22-Ma39786	X		X	
16	SX_OB_20220318_20_01_S_S_Primary_EUF	Mar 18, 2022	8:01PM	AUS Leachate - pH 5.0	M22-Ma39787	X		X	
17	SX_OB_20220319_00_09_S_S_Primary_EUF	Mar 19, 2022	12:09AM	AUS Leachate - pH 5.0	M22-Ma39788	X		X	
18	SX_OB_20220319_00_09_S_S_Primary_EUF	Mar 19, 2022	4:03AM	AUS Leachate	M22-Ma39789	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
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<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	319_04_03_S S_Primary_EU F			- pH 5.0					
19	SX_OB_20220 318_08_10_S S_Triplicate_E UF	Mar 18, 2022	8:10AM	AUS Leachate - Reagent Water	M22-Ma39790	X		X	
20	SX_OB_20220 318_08_15_S S_Primary_EU F	Mar 18, 2022	8:15AM	AUS Leachate - Reagent Water	M22-Ma39791	X		X	
21	SX_OB_20220 318_12_07_S S_Primary_EU	Mar 18, 2022	12:07PM	AUS Leachate - Reagent Water	M22-Ma39792	X		X	

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<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	F								
22	SX_OB_20220318_16_03_S_S_Primary_EU_F	Mar 18, 2022	4:03PM	AUS Leachate - Reagent Water	M22-Ma39793	X		X	
23	SX_OB_20220318_16_04_S_S_Duplicate_EU_F	Mar 18, 2022	4:04PM	AUS Leachate - Reagent Water	M22-Ma39794	X		X	
24	SX_OB_20220318_20_01_S_S_Primary_EU_F	Mar 18, 2022	8:01PM	AUS Leachate - Reagent Water	M22-Ma39795	X		X	
25	SX_OB_20220319_09_00_S_S_Primary_EU_F	Mar 19, 2022	12:09AM	AUS Leachate	M22-Ma39796	X		X	



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<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	319_00_09_S S_Primary_EU F			- Reagent Water					
26	SX_OB_20220 319_04_03_S S_Primary_EU F	Mar 19, 2022	4:03AM	AUS Leachate - Reagent Water	M22-Ma39797	X		X	
<b>Test Counts</b>						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**

<b>mg/kg:</b> milligrams per kilogram	<b>mg/L:</b> milligrams per litre	<b>µg/L:</b> micrograms per litre
<b>ppm:</b> parts per million	<b>ppb:</b> parts per billion	<b>%:</b> Percentage
<b>org/100 mL:</b> Organisms per 100 millilitres	<b>NTU:</b> Nephelometric Turbidity Units	<b>MPN/100 mL:</b> Most Probable Number of organisms per 100 millilitres

**Terms**

<b>APHA</b>	American Public Health Association
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	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.
<b>NCP</b>	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.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>TBTO</b>	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.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 5.4
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	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
<b>Method Blank</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
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	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonamido substances</b>						
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	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
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	
<b>Method Blank</b>						
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
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	
<b>LCS - % Recovery</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA)	%	87		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	72		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	85		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	87		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	78		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	85		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	85		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	96		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	92		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	120		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	99		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>								
Perfluorooctane sulfonamide (FOSA)	%	105			50-150	Pass		
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	136			50-150	Pass		
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	100			50-150	Pass		
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	82			50-150	Pass		
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	84			50-150	Pass		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	84			50-150	Pass		
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	82			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	83			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	69			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	105			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	84			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	80			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	87			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	80			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	56			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)</b>								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	98			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	89			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	88			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	82			50-150	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>								
Perfluorobutanoic acid (PFBA)	M22-Ma36235	NCP	%	99		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma36235	NCP	%	97		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma36235	NCP	%	84		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma36235	NCP	%	77		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma36235	NCP	%	121		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma36235	NCP	%	95		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma36235	NCP	%	94		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma36235	NCP	%	128		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma36235	NCP	%	92		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ma36235	NCP	%	108		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma36235	NCP	%	103		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>								
Perfluorooctane sulfonamide (FOSA)	M22-Ma36235	NCP	%	91		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma36235	NCP	%	114		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma36235	NCP	%	87		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma36235	NCP	%	95		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma36235	NCP	%	96		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-Ma36235	NCP	%	84			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma36235	NCP	%	72			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M22-Ma36235	NCP	%	81			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ma36235	NCP	%	65			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma36235	NCP	%	77			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma36235	NCP	%	96			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma36235	NCP	%	80			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma36235	NCP	%	98			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ma45565	NCP	%	97			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ma45565	NCP	%	65			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma36235	NCP	%	108			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma45565	NCP	%	103			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma36235	NCP	%	92			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma36235	NCP	%	94			50-150	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M22-Ma38584	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma38584	NCP	ug/L	0.02	0.02	13	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma38584	NCP	ug/L	0.02	0.02	3.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma38584	NCP	ug/L	0.01	0.02	25	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTTrDA)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTTeDA)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ma38584	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma38584	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma38584	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma38584	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma38584	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma38584	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma38584	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma38584	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-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma38584	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma38584	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass

**Comments**
**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).

**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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## QUALITY CONTROL REPORT

<b>Work Order</b>	<b>: EM2204841</b>	<b>Page</b>	: 1 of 38
<b>Client</b>	<b>: AGON ENVIRONMENTAL PTY LTD</b>	<b>Laboratory</b>	: Environmental Division Melbourne
<b>Contact</b>	: CRAIG TRIMBUR	<b>Contact</b>	: Bronwyn Sheen
<b>Address</b>	: D1.1 63-85 TURNER STREET PORT MELBOURNE 3207	<b>Address</b>	: 4 Westall Rd Springvale VIC Australia 3171
<b>Telephone</b>	: ----	<b>Telephone</b>	: +6138549 9600
<b>Project</b>	: JC0927	<b>Date Samples Received</b>	: 19-Mar-2022
<b>Order number</b>	: ----	<b>Date Analysis Commenced</b>	: 19-Mar-2022
<b>C-O-C number</b>	: 20220319050418-ALS-12	<b>Issue Date</b>	: 29-Mar-2022
<b>Sampler</b>	: Brandon, Toby		
<b>Site</b>	: ----		
<b>Quote number</b>	: EN/150/19 -WGTP -Bulk Sample Quote		
<b>No. of samples received</b>	: 18		
<b>No. of samples analysed</b>	: 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.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
Jarwis Nheu	Senior Inorganic Chemist	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 Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4246732)</b>									
EM2204841-001	SX_OB_20220318_08_08_ SS_Primary_ALS	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	88	87	0.0	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	169	202	17.8	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	42	43	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	56	57	2.2	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	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	<10	<10	0.0	No Limit
EG005T: Zinc	7440-66-6	5	mg/kg	98	106	7.5	0% - 20%		
EM2204844-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	45	45	0.0	0% - 20%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	30	25	17.8	0% - 50%
		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	30	32	5.2	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	5	<5	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	13	10	24.0	No Limit		

**EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4249042)**



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 (%)
<b>EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4249042) - continued</b>									
EM2204524-001	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	6.5	6.5	0.0	0% - 20%
EM2204841-010	SX_OB_20220319_04_07_ SS_Primary_ALS	EA001: pH (CaCl2)	----	0.1	pH Unit	8.7	8.6	0.0	0% - 20%
<b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4246607)</b>									
EM2204516-001	Anonymous	EA055: Moisture Content	----	0.1	%	<0.1	0.6	141	No Limit
EM2204762-002	Anonymous	EA055: Moisture Content	----	0.1	%	26.8	26.9	0.0	0% - 20%
<b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4246608)</b>									
EM2204841-007	SX_OB_20220318_16_12_ SS_Primary_ALS	EA055: Moisture Content	----	0.1	%	33.0	35.2	6.5	0% - 20%
EM2204924-009	Anonymous	EA055: Moisture Content	----	0.1	%	29.1	28.5	2.0	0% - 20%
<b>EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4246733)</b>									
EM2204841-001	SX_OB_20220318_08_08_ SS_Primary_ALS	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2204844-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 4246896)</b>									
EM2204516-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM2204535-003	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
<b>EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4247674)</b>									
EM2204841-009	SX_OB_20220319_00_02_ SS_Primary_ALS	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<5	<5	0.0	No Limit
EM2204575-001	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
<b>EK040T: Fluoride Total (QC Lot: 4246875)</b>									
EM2204789-018	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	80	100	21.1	No Limit
EM2204924-001	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	120	120	0.0	No Limit
<b>EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4244954)</b>									
EM2204841-001	SX_OB_20220318_08_08_ SS_Primary_ALS	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2204924-005	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4237606)</b>									
EM2204841-001	SX_OB_20220318_08_08_ 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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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
<b>EP074H: Naphthalene (QC Lot: 4237606)</b>									



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 (%)
<b>EP074H: Naphthalene (QC Lot: 4237606) - continued</b>									
EM2204841-001	SX_OB_20220318_08_08_ SS_Primary_ALS	EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
<b>EP074I: Volatile Halogenated Compounds (QC Lot: 4237606)</b>									
EM2204841-001	SX_OB_20220318_08_08_ 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		
<b>EP075A: Phenolic Compounds (Halogenated) (QC Lot: 4244952)</b>									
EM2204841-001	SX_OB_20220318_08_08_ 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
		EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	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
		EM2204924-005	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50
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



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 (%)
<b>EP075A: Phenolic Compounds (Halogenated) (QC Lot: 4244952) - continued</b>									
EM2204924-005	Anonymous	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
		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
<b>EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4244952)</b>									
EM2204841-001	SX_OB_20220318_08_08_ SS_Primary_ALS	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	<20	<20	0.0	No Limit
EM2204924-005	Anonymous	EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<20	<20	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
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4244952)</b>	SX_OB_20220318_08_08_ 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		



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 (%)
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4244952) - continued</b>									
EM2204841-001	SX_OB_20220318_08_08_ SS_Primary_ALS	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
EM2204924-005	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
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		
<b>EP075I: Organochlorine Pesticides (QC Lot: 4244952)</b>									
EM2204841-001	SX_OB_20220318_08_08_ 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



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 (%)
<b>EP075: Organochlorine Pesticides (QC Lot: 4244952) - continued</b>									
EM2204841-001	SX_OB_20220318_08_08_ SS_Primary_ALS	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
EM2204924-005	Anonymous	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		
<b>EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4237606)</b>									
EM2204841-001	SX_OB_20220318_08_08_ SS_Primary_ALS	EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<20	<20	0.0	No Limit
<b>EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4244953)</b>									
EM2204841-001	SX_OB_20220318_08_08_ 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
EM2204924-005	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
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4237606)</b>									



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 (%)
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4237606) - continued</b>									
EM2204841-001	SX_OB_20220318_08_08_ 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
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4244953)</b>									
EM2204841-001	SX_OB_20220318_08_08_ 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
EM2204924-005	Anonymous	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
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4241501)</b>									
EM2204783-024	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
EM2204841-002	SX_OB_20220318_08_09_ SS_Duplicate_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
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4241501)</b>									
EM2204783-024	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit



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 (%)
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4241501) - continued</b>									
EM2204841-002	SX_OB_20220318_08_09_ SS_Duplicate_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
		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		
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4241501)</b>									
EM2204783-024	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
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EM2204841-002	SX_OB_20220318_08_09_ SS_Duplicate_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4241501)</b>									





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 (%)
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4241501) - continued</b>									
EM2204783-024	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2204841-002	SX_OB_20220318_08_09_SS_Duplicate_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
<b>EP231P: PFAS Sums (QC Lot: 4241501)</b>									
EM2204783-024	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
EM2204841-002	SX_OB_20220318_08_09_SS_Duplicate_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 (%)
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4248012)</b>									
EM2204841-003	SX_OB_20220318_08_40_SR_Rinsate_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



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 (%)
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4251119)</b>									
EM2204534-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2204575-003	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4251120)</b>									
EM2204534-006	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2204575-008	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4251121)</b>									
EM2204841-008	SX_OB_20220318_20_06_ 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
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4251921)</b>									
EM2204841-016	SX_OB_20220318_20_06_ 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



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 (%)
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4251921) - continued</b>									
EM2204841-016	SX_OB_20220318_20_06_ SS_Primary_ALS	EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2204945-010	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4248012)</b>									
EM2204841-003	SX_OB_20220318_08_40_ SR_Rinsate_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 (PFTTrDA)	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		
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4251119)</b>									
EM2204534-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit		
EM2204575-003	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit



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 (%)
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4251119) - continued</b>									
EM2204575-003	Anonymous	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
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4251120)</b>									
EM2204534-006	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EM2204575-008	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4251121)</b>									
EM2204841-008	SX_OB_20220318_20_06_ 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



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 (%)	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4251121) - continued</b>										
EM2204841-008	SX_OB_20220318_20_06_ SS_Primary_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4251921)</b>										
EM2204841-016	SX_OB_20220318_20_06_ 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	
EM2204945-010	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit	
		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	
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4248012)</b>	EM2204841-003	SX_OB_20220318_08_40_ SR_Rinsate_ALS	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
			EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.05	<0.05	0.0	No Limit
			EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	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



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 (%)
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4248012) - continued</b>									
EM2204841-003	SX_OB_20220318_08_40_ SR_Rinsate_ALS	EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4251119)</b>									
EM2204534-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2204575-003	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4251120)</b>									
EM2204534-006	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		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 (%)
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4251120) - continued</b>									
EM2204534-006	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2204575-008	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4251121)</b>									
EM2204841-008	SX_OB_20220318_20_06_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
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4251921)</b>									
EM2204841-016	SX_OB_20220318_20_06_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



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 (%)
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4251921) - continued</b>									
EM2204841-016	SX_OB_20220318_20_06_ SS_Primary_ALS	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
EM2204945-010	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4248012)</b>									
EM2204841-003	SX_OB_20220318_08_40_ SR_Rinsate_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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4251119)</b>									
EM2204534-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2204575-003	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit





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 (%)
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4251119) - continued</b>									
EM2204575-003	Anonymous	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4251120)</b>									
EM2204534-006	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2204575-008	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4251121)</b>									
EM2204841-008	SX_OB_20220318_20_06_ 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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4251921)</b>									
EM2204841-016	SX_OB_20220318_20_06_ 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
EM2204945-010	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4251921) - continued</b>									
EM2204945-010	Anonymous	EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231P: PFAS Sums (QC Lot: 4248012)</b>									
EM2204841-003	SX_OB_20220318_08_40_SR_Rinsate_ALS	EP231X-INJ: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	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	<0.05	<0.05	0.0	No Limit
<b>EP231P: PFAS Sums (QC Lot: 4251119)</b>									
EM2204534-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2204575-003	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
<b>EP231P: PFAS Sums (QC Lot: 4251120)</b>									
EM2204534-006	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2204575-008	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
<b>EP231P: PFAS Sums (QC Lot: 4251121)</b>									
EM2204841-008	SX_OB_20220318_20_06_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
<b>EP231P: PFAS Sums (QC Lot: 4251921)</b>									
EM2204841-016	SX_OB_20220318_20_06_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

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 Work Order : EM2204841  
 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 (%)
<b>EP231P: PFAS Sums (QC Lot: 4251921) - continued</b>									
EM2204945-010	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit



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

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

Sub-Matrix: **SOIL**

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	
<b>EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4246732)</b>									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	103	70.0	130	
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	64.2	50.0	130	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	108	70.0	130	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	100	70.0	130	
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	98.2	70.0	130	
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	95.1	70.0	130	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	101	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	76.9	70.0	130	
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	92.4	70.0	130	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	77.5	70.0	130	
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4249663)</b>									
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.2	----	----	----	----	
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4249664)</b>									
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.2	----	----	----	----	
<b>EA001: pH in soil using 0.01M CaCl extract (QCLot: 4249042)</b>									
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	101	98.8	101	
					7 pH Unit	100	99.3	101	
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4246733)</b>									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	79.7	70.0	130	
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4246896)</b>									
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	80.6	70.0	130	
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4247674)</b>									
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	99.2	70.0	130	
<b>EK040T: Fluoride Total (QCLot: 4246875)</b>									
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	82.5	75.2	110	
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4244954)</b>									
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	133	67.4	136	
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4237606)</b>									
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	86.5	69.2	116	
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	85.5	67.7	116	
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	85.4	66.6	115	



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	
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4237606) - continued</b>									
EP074-UT: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4.2 mg/kg	83.0	65.2	112	
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	85.1	69.4	111	
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	84.6	68.4	110	
<b>EP074H: Naphthalene (QCLot: 4237606)</b>									
EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	0.6 mg/kg	96.2	72.3	114	
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4237606)</b>									
EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	62.2	47.0	138	
EP074-UT: 1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	78.4	57.6	125	
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	85.4	72.3	115	
EP074-UT: trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	82.4	60.5	122	
EP074-UT: cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	85.4	70.3	112	
EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	88.0	66.6	115	
EP074-UT: 1,1,1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	83.6	64.4	122	
EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	83.6	58.4	127	
EP074-UT: 1,2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	95.6	72.9	114	
EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	85.6	64.7	115	
EP074-UT: 1,1,2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	89.0	72.6	116	
EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	86.6	60.0	119	
EP074-UT: 1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	85.4	71.8	116	
EP074-UT: 1,1,2,2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	85.2	66.1	116	
EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	78.7	39.8	128	
EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	88.8	70.3	113	
EP074-UT: 1,4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	86.9	62.6	113	
EP074-UT: 1,2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	86.8	70.8	110	
EP074-UT: 1,2,4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	91.4	48.4	120	
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4244952)</b>									
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	100	74.5	126	
EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	90.5	72.7	126	
EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	92.3	73.5	132	
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	89.1	72.8	128	
EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	2 mg/kg	99.4	73.3	134	
EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	2 mg/kg	88.7	72.4	128	
EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	89.3	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	90.7	71.9	128	
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	80.6	54.4	135	
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4244952)</b>									



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	
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4244952) - continued</b>									
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	97.0	71.5	130	
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	98.4	73.4	129	
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	94.3	74.3	129	
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	92.2	70.9	133	
EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	90.8	71.8	132	
EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	92.2	41.0	156	
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	94.9	65.3	134	
EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	88.4	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	89.2	62.0	128	
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	82.2	34.5	137	
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4244952)</b>									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	93.1	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	93.9	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	92.1	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	94.8	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	94.7	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	95.0	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	93.8	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	95.3	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	95.4	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	99.2	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	95.3	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	95.3	65.1	130	
EP075-EM: Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	95.3	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	94.7	72.9	135	
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	95.1	71.3	134	
<b>EP075I: Organochlorine Pesticides (QCLot: 4244952)</b>									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	93.7	71.0	129	
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	91.7	74.8	126	
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	94.3	75.7	130	
EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	2 mg/kg	93.6	70.8	130	
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	96.5	76.5	134	
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	87.6	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	92.9	76.8	130	
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	91.0	73.6	130	
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	93.2	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	93.4	75.3	131	
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	97.2	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	
<b>EP075I: Organochlorine Pesticides (QCLot: 4244952) - continued</b>									
EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	96.1	71.0	132	
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	97.2	78.0	133	
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	81.9	69.0	143	
EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	2 mg/kg	104	55.7	145	
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	98.1	71.4	135	
EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	95.4	74.8	134	
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	97.2	70.2	135	
EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	95.6	77.7	133	
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	95.9	63.6	135	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4237606)</b>									
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	92.2	61.1	119	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4244953)</b>									
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	760 mg/kg	94.8	74.4	129	
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	3270 mg/kg	96.2	81.0	123	
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1550 mg/kg	95.4	81.8	121	
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	95.9	70.0	130	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4237606)</b>									
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	92.0	59.9	119	
EP074-UT: C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	----	----	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4244953)</b>									
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1110 mg/kg	108	75.4	132	
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	4180 mg/kg	92.4	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	290 mg/kg	96.3	73.3	136	
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	95.7	70.0	130	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4241501)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	87.9	72.0	128	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	89.7	73.0	123	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	75.8	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	98.6	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	91.4	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	85.3	59.0	134	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4241501)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	101	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.2	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.7	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.9	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
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4241501) - continued</b>									
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.3	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	82.2	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.9	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.9	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.1	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	96.7	69.0	133	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4241501)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.4	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	95.3	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	94.0	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	89.7	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	103	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	61.0	139	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4241501)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	101	62.0	145	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00119 mg/kg	95.3	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	98.5	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	108	70.0	130	
<b>EP231P: PFAS Sums (QCLot: 4241501)</b>									
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
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4248012)</b>									
EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.444 µg/L	100	72.0	130	
EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.47 µg/L	101	71.0	127	
EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.457 µg/L	99.3	68.0	131	
EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.477 µg/L	108	69.0	134	
EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.465 µg/L	89.7	65.0	140	
EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.482 µg/L	91.2	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	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4251119)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	107	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	94.6	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	99.0	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	106	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	108	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	109	53.0	142	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4251120)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	99.5	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	105	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	96.8	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	99.8	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	89.3	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	101	53.0	142	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4251121)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	97.5	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	101	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	99.7	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	101	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	86.4	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	91.0	53.0	142	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4251921)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	97.4	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	103	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	96.2	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	94.9	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	96.0	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	90.7	53.0	142	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4248012)</b>									
EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	2.5 µg/L	96.3	73.0	129	
EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.5 µg/L	94.7	72.0	129	
EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.5 µg/L	98.2	72.0	129	
EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.5 µg/L	97.2	72.0	130	
EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.5 µg/L	104	71.0	133	
EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.5 µg/L	99.6	69.0	130	
EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.5 µg/L	94.1	71.0	129	
EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.5 µg/L	104	69.0	133	
EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.5 µg/L	97.1	72.0	134	
EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.5 µg/L	95.2	65.0	144	



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	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4248012) - continued</b>									
EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	1.25 µg/L	102	71.0	132	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4251119)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	100	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	110	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	101	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	106	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	90.9	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	97.4	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	110	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	110	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	112	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	118	71.0	132	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4251120)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	100	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	98.3	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	98.8	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	112	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	101	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	104	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 (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	97.3	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	96.1	71.0	132	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4251121)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	97.4	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	101	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	97.5	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	110	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	95.9	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	103	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	99.9	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	94.3	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	101	71.0	132	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4251921)</b>									



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
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4251921) - continued</b>								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	97.7	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	105	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	97.1	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	108	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	97.0	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	121	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	95.0	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	115	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	94.3	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	87.0	71.0	132
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4248012)</b>								
EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.5 µg/L	106	67.0	137
EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	1.25 µg/L	106	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	106	70.0	130
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	1.25 µg/L	104	70.0	130
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.5 µg/L	107	65.0	136
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.5 µg/L	93.4	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4251119)</b>								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	103	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	102	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	99.2	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	102	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	100	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	117	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	99.0	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4251120)</b>								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	106	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	118	68.0	141



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	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4251120) - continued</b>									
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	99.7	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	96.8	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	100	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	106	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	106	61.0	135	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4251121)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	102	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	109	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	108	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	99.4	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	104	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	93.8	61.0	135	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4251921)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	105	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	135	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	112	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	122	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	105	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	91.8	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	117	61.0	135	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4248012)</b>									
EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.469 µg/L	103	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	112	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	108	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	103	70.0	130	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4251119)</b>									



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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4251119) - continued</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	106	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	97.7	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	98.3	67.0	138	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	77.6	70.0	130	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4251120)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	92.2	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	102	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	113	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	96.5	70.0	130	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4251121)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	98.5	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	102	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	99.4	67.0	138	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	89.2	70.0	130	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4251921)</b>									
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	111	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	103	67.0	138	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	84.1	70.0	130	
<b>EP231P: PFAS Sums (QCLot: 4248012)</b>									
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	----	----	----	----	
<b>EP231P: PFAS Sums (QCLot: 4251119)</b>									
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	----	----	----	----	
<b>EP231P: PFAS Sums (QCLot: 4251120)</b>									
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	----	----	----	----	
<b>EP231P: PFAS Sums (QCLot: 4251121)</b>									
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 Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
<b>EP231P: PFAS Sums (QCLot: 4251121) - continued</b>								
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----
<b>EP231P: PFAS Sums (QCLot: 4251921)</b>								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

### Matrix Spike (MS) Report

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

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%) MS	Acceptable Limits (%) Low High	
<b>EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4246732)</b>							
EM2204841-002	SX_OB_20220318_08_09_SS_Duplicate_ALS	EG005T: Arsenic	7440-38-2	50 mg/kg	83.8	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	91.0	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	79.1	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	97.9	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	90.3	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	78.4	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	87.3	80.0	120
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4246733)</b>							
EM2204841-002	SX_OB_20220318_08_09_SS_Duplicate_ALS	EG035T: Mercury	7439-97-6	0.5 mg/kg	90.8	76.0	116
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4246896)</b>							
EM2204516-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	66.3	58.0	114
EM2204516-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	82.6	58.0	114
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4247674)</b>							
EM2204575-002	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	111	70.0	130
<b>EK040T: Fluoride Total (QCLot: 4246875)</b>							
EM2204841-001	SX_OB_20220318_08_08_SS_Primary_ALS	EK040T: Fluoride	16984-48-8	400 mg/kg	93.5	70.0	130
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4244954)</b>							
EM2204841-005	SX_OB_20220318_12_11_SS_Primary_ALS	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	127	59.6	152
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4237606)</b>							
EM2204841-002	SX_OB_20220318_08_09_SS_Duplicate_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	87.2	53.7	130
		EP074-UT: Toluene	108-88-3	2 mg/kg	89.3	55.1	124



Sub-Matrix: SOIL

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4237606)</b>							
EM2204841-002	SX_OB_20220318_08_09_SS_Duplicate_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	80.8	38.4	145
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	79.6	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	81.4	55.5	122
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4244952)</b>							
EM2204841-002	SX_OB_20220318_08_09_SS_Duplicate_ALS	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	89.0	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	86.3	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	62.0	10.0	144
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4244952)</b>							
EM2204841-002	SX_OB_20220318_08_09_SS_Duplicate_ALS	EP075-EM: Phenol	108-95-2	3 mg/kg	90.5	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	84.2	34.2	129
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4244952)</b>							
EM2204841-002	SX_OB_20220318_08_09_SS_Duplicate_ALS	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	83.8	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	80.7	37.8	152
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4237606)</b>							
EM2204841-002	SX_OB_20220318_08_09_SS_Duplicate_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	84.8	42.3	111
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4244953)</b>							
EM2204841-006	SX_OB_20220318_16_06_SS_Triplicate_ALS	EP071-EM: C10 - C14 Fraction	----	760 mg/kg	89.8	71.3	126
		EP071-EM: C15 - C28 Fraction	----	3270 mg/kg	89.1	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1550 mg/kg	88.2	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	5580 mg/kg	88.9	70.0	130
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4237606)</b>							
EM2204841-002	SX_OB_20220318_08_09_SS_Duplicate_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	85.6	39.9	109
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4244953)</b>							
EM2204841-006	SX_OB_20220318_16_06_SS_Triplicate_ALS	EP071-EM: >C10 - C16 Fraction	----	1110 mg/kg	101	71.5	130
		EP071-EM: >C16 - C34 Fraction	----	4180 mg/kg	85.5	76.9	119
		EP071-EM: >C34 - C40 Fraction	----	290 mg/kg	90.2	65.3	139
		EP071-EM: >C10 - C40 Fraction (sum)	----	5580 mg/kg	88.9	70.0	130
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4241501)</b>							
EM2204783-028	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	101	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	92.5	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	90.5	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	95.4	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	79.6	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	80.7	59.0	134
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4241501)</b>							
EM2204783-028	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	96.4	71.0	135



Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4241501) - continued</b>							
EM2204783-028	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	96.5	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	98.2	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	92.2	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	94.3	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	93.0	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	85.4	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	94.1	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	92.4	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	88.8	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	104	69.0	133
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4241501)</b>							
EM2204783-028	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	91.6	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	96.0	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	97.5	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	92.7	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	97.1	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	115	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	91.1	61.0	139
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4241501)</b>							
EM2204783-028	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	98.5	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	94.0	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	99.3	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	81.5	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
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4248012)</b>							
EM2204841-004	SX_OB_20220318_08_41_SB_Blank_ALS	EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.444 µg/L	115	72.0	130
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.47 µg/L	99.1	71.0	127
		EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.457 µg/L	92.2	68.0	131
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.477 µg/L	99.4	69.0	134
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.465 µg/L	99.7	65.0	140
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.482 µg/L	101	53.0	142





Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4251119)</b>							
EM2204534-002	Anonymous	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	94.3	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	93.8	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	120	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	108	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	105	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4251120)</b>							
EM2204534-007	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	109	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	115	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	100	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	111	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	97.1	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	# 43.9	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4251121)</b>							
EM2204841-009	SX_OB_20220319_00_02_SS_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	103	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	103	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	102	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	110	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	92.4	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	103	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4251921)</b>							
EM2204841-017	SX_OB_20220319_00_02_SS_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	106	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	105	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	105	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	107	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	85.8	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	86.3	53.0	142
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4248012)</b>							
EM2204841-004	SX_OB_20220318_08_41_SB_Blank_ALS	EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	2.5 µg/L	93.8	73.0	129
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.5 µg/L	96.6	72.0	129
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.5 µg/L	97.4	72.0	129
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.5 µg/L	104	72.0	130
		EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.5 µg/L	98.8	71.0	133
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.5 µg/L	108	69.0	130
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.5 µg/L	98.0	71.0	129
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.5 µg/L	96.2	69.0	133
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.5 µg/L	106	72.0	134
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.5 µg/L	98.4	65.0	144



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
Laboratory sample ID		Sample ID	Method: Compound	CAS Number	Spike Concentration	SpikeRecovery(%) MS	Acceptable Limits (%) Low High
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4248012) - continued</b>							
EM2204841-004	SX_OB_20220318_08_41_SB_Blank_ALS	EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	1.25 µg/L	93.7	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4251119)</b>							
EM2204534-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	104	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	98.7	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	102	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	100	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	103	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	99.5	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	114	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	110	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	102	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	103	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4251120)</b>							
EM2204534-007	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	76.6	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	97.2	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	102	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	97.8	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	106	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	87.6	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	# 67.0	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	# 47.0	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	# 32.8	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	# 29.6	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4251121)</b>							
EM2204841-009	SX_OB_20220319_00_02_SS_Primary_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	106	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	98.4	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	102	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	109	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	99.5	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	120	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	108	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	97.8	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	100	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4251921)</b>							



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4251921) - continued</b>							
EM2204841-017	SX_OB_20220319_00_02_SS_Primary_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	102	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	107	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	92.6	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	113	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	100	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	120	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	94.0	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	98.4	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	97.9	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	86.2	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	92.0	71.0	132		
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4248012)</b>							
EM2204841-004	SX_OB_20220318_08_41_SB_Blank_ALS	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.5 µg/L	98.7	67.0	137
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	1.25 µg/L	107	68.0	141
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	1.25 µg/L	102	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	1.25 µg/L	93.4	70.0	130
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	1.25 µg/L	113	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.5 µg/L	108	65.0	136
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.5 µg/L	104	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4251119)</b>							
EM2204534-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	114	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	114	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	108	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	101	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	105	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	114	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	107	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4251120)</b>							



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4251120) - continued</b>							
EM2204534-007	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	92.8	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	93.0	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	# 69.5	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	84.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	77.2	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	# 61.2	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	# 52.1	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4251121)</b>							
EM2204841-009	SX_OB_20220319_00_02_SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	110	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	127	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	108	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	116	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	106	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	114	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	101	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4251921)</b>							
EM2204841-017	SX_OB_20220319_00_02_SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	104	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	139	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	104	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	122	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	116	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	102	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	131	61.0	135
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4248012)</b>							



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4248012) - continued</b>							
EM2204841-004	SX_OB_20220318_08_41_SB_Blank_ALS	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.469 µg/L	100	63.0	143
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.476 µg/L	86.3	64.0	140
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.48 µg/L	90.6	67.0	138
		EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.483 µg/L	86.7	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4251119)</b>							
EM2204534-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	109	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	92.2	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	91.8	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	70.3	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4251120)</b>							
EM2204534-007	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	108	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	102	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	# 51.3	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4251121)</b>							
EM2204841-009	SX_OB_20220319_00_02_SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	108	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	92.1	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	104	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	84.9	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4251921)</b>							
EM2204841-017	SX_OB_20220319_00_02_SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	97.4	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	120	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	97.2	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	70.5	70.0	130

Thanks for that Emma.

Ok sure. I will modify the work order and re-issue the SRN with the revised, standard 5-day TAT.

Best Regards,



right solutions.  
right partner.

Joshua Alexander  
Project Manager - Environmental  
Springvale, Victoria

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**From:** Emma Strong <[emma.strong@eprisk.com.au](mailto:emma.strong@eprisk.com.au)>  
**Sent:** Saturday, 19 March 2022 2:09 PM  
**To:** Josh Alexander <[josh.alexander@ALSGlobal.com](mailto:josh.alexander@ALSGlobal.com)>  
**Cc:** Bronwyn Sheen <[bronwyn.sheen@alsglobal.com](mailto:bronwyn.sheen@alsglobal.com)>; Labreports.TST <[labreports.tst@agonenviro.com.au](mailto:labreports.tst@agonenviro.com.au)>  
**Subject:** [EXTERNAL] - WGTP TST sample delivery

**CAUTION:** This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

Hi Josh,

Please find 1 x COC for samples collected at pivot and that are arriving today.

Also, there was a mistake on the COC saying a 3 day turnaround time. It should be **5 days**, which I have updated in the attached.

Kind regards,

**Emma Strong**

Environmental Scientist

M 0402 510 610 | E [emma.strong@eprisk.com.au](mailto:emma.strong@eprisk.com.au)

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### CHAIN OF CUSTODY DOCUMENTATION

CLIENT: Agon Environmental				SAMPLER: <b>Brandon and Toby - AGON</b>			
ADDRESS / OFFICE: Melbourne				MOBILE 1: +61 400 826 907 (Craig Timbur)			
PROJECT MANAGER (PM): Craig Timbur				MOBILE 2: +61 490 411 004 (David Lawson)			
PROJECT ID: JC0927				EMAIL REPORT TO: <a href="mailto:Labreports.TST@agonenviro.com.au">Labreports.TST@agonenviro.com.au</a> <a href="mailto:agonenvironmental@esdat.com.au">agonenvironmental@esdat.com.au</a>			
SITE: 20220319050419-ALS-12				P.O. NO.: <a href="mailto:motherhublabresults1@owdtd.com.au">motherhublabresults1@owdtd.com.au</a> <a href="mailto:Labreports.TST@agonenviro.com.au">Labreports.TST@agonenviro.com.au</a> <a href="mailto:agonenvironmental@esdat.com.au">agonenvironmental@esdat.com.au</a>			
RESULTS REQUIRED (Date): 5 days				QUOTE NO.: ME-160-19 WGRP			
FOR LABORATORY USE ONLY				ANALYSIS REQUIRED INCLUDING SUITES (note - suite codes must be listed to attract suite prices)			
COOLER SEAL (circle appropriate)				SPOIL SAMPLE PREP			
Intact Yes No N/A				P16 plus Cr			
SAMPLE TEMPERATURE				PFAS 28 Extended suite			
CHILLED: Yes No				ASLP PFAS - Extended Suite (Lab to determine pH)			
				DI Leachate PFAS - Extended Suite			
SAMPLER INFORMATION (note: S = Soil, W=Water)				CONTAINER INFORMATION			
ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles	Notes:
SX_OB_20220318_08_08_SS_Pt	mary_als	S	18.03.2022	8:08	Bucket	1	
SX_OB_20220318_08_09_SS_Dup	llcate_als	S	18.03.2022	8:09	Bucket	1	
SX_OB_20220318_08_40_SR_Rtn	sate_als	W	18.03.2022	8:40	Bottle	1	
SX_OB_20220318_08_41_SB_Bla	nl_als	W	18.03.2022	8:41	Bottle	1	
SX_OB_20220318_12_11_SS_Pt	mary_als	S	18.03.2022	12:11	Bucket	1	
SX_OB_20220318_16_06_SS_Trp	llcate_als	S	18.03.2022	16:06	Bucket	1	
SX_OB_20220318_16_12_SS_Pt	mary_als	S	18.03.2022	16:12	Bucket	1	
SX_OB_20220318_20_06_SS_Pt	mary_als	S	18.03.2022	20:06	Bucket	1	
SX_OB_20220318_00_02_SS_Pt	mary_als	S	19.03.2022	0:02	Bucket	1	
SX_OB_20220318_04_07_SS_Pt	mary_als	S	19.03.2022	4:07	Bucket	1	
BEING QUISHED BY:				RECEIVED BY:			
Name:	Date:	Name:	Date:	METHOD OF SHIPMENT			
Of:	Time:	Of:	Time:				
Name:	Date:	Name:	Date:	Transport Co:			
Of:	Time:	Of:	Time:				



Australian Laboratory Services Pty Ltd

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide Preserved; S = 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 Bad for Acid Sulphate Soils; B = Unpreserved Bag.

## QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EM2204841	Page	: 1 of 14
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: CRAIG TRIMBUR	Telephone	: +6138549 9600
Project	: JC0927	Date Samples Received	: 19-Mar-2022
Site	: ----	Issue Date	: 29-Mar-2022
Sampler	: Brandon, Toby	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.**
- **Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.**

#### Outliers : Analysis Holding Time Compliance

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

#### Outliers : Frequency of Quality Control Samples

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





### Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
<b>Matrix Spike (MS) Recoveries</b>							
EP231A: Perfluoroalkyl Sulfonic Acids	EM2204534--007	Anonymous	Perfluorodecane sulfonic acid (PFDS)	335-77-3	43.9 %	53.0-142%	Recovery less than lower data quality objective
EP231B: Perfluoroalkyl Carboxylic Acids	EM2204534--007	Anonymous	Perfluoroundecanoic acid (PFUnDA)	2058-94-8	67.0 %	69.0-133%	Recovery less than lower data quality objective
EP231B: Perfluoroalkyl Carboxylic Acids	EM2204534--007	Anonymous	Perfluorododecanoic acid (PFDoDA)	307-55-1	47.0 %	72.0-134%	Recovery less than lower data quality objective
EP231B: Perfluoroalkyl Carboxylic Acids	EM2204534--007	Anonymous	Perfluorotridecanoic acid (PFTrDA)	72629-94-8	32.8 %	65.0-144%	Recovery less than lower data quality objective
EP231B: Perfluoroalkyl Carboxylic Acids	EM2204534--007	Anonymous	Perfluorotetradecanoic acid (PFTeDA)	376-06-7	29.6 %	71.0-132%	Recovery less than lower data quality objective
EP231C: Perfluoroalkyl Sulfonamides	EM2204534--007	Anonymous	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	69.5 %	70.0-130%	Recovery less than lower data quality objective
EP231C: Perfluoroalkyl Sulfonamides	EM2204534--007	Anonymous	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	61.2 %	65.0-136%	Recovery less than lower data quality objective
EP231C: Perfluoroalkyl Sulfonamides	EM2204534--007	Anonymous	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	52.1 %	61.0-135%	Recovery less than lower data quality objective
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2204534--007	Anonymous	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	51.3 %	70.0-130%	Recovery less than lower data quality objective

### Regular Sample Surrogates

Sub-Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
<b>Samples Submitted</b>							
EP075S: Acid Extractable Surrogates (Waste Classification)	EM2204841-009	SX_OB_20220319_00_02_SS	2,4,6-Tribromophenol	118-79-6	136 %	54.1-129 %	Recovery greater than upper data quality objective
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)	EM2204841-009	SX_OB_20220319_00_02_SS	Nitrobenzene-D5	4165-60-0	133 %	63.4-131 %	Recovery greater than upper data quality objective
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)	EM2204841-009	SX_OB_20220319_00_02_SS	Anthracene-d10	1719-06-8	134 %	69.6-133 %	Recovery greater than upper data quality objective



## Analysis Holding Time Compliance

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

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

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

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

Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
<b>Soil Glass Jar - Unpreserved (EA001)</b>								
SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	25-Mar-2022	25-Mar-2022	✓	25-Mar-2022	25-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EA001)</b>								
SX_OB_20220319_00_02_SS_Primary_ALS	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	25-Mar-2022	26-Mar-2022	✓	25-Mar-2022	25-Mar-2022	✓
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
<b>Soil Glass Jar - Unpreserved (EA055)</b>								
SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	----	----	----	24-Mar-2022	01-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EA055)</b>								
SX_OB_20220319_00_02_SS_Primary_ALS	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	----	----	----	24-Mar-2022	02-Apr-2022	✓
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
<b>Soil Glass Jar - Unpreserved (EG005T)</b>								
SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	24-Mar-2022	14-Sep-2022	✓	25-Mar-2022	14-Sep-2022	✓
<b>Soil Glass Jar - Unpreserved (EG005T)</b>								
SX_OB_20220319_00_02_SS_Primary_ALS	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	24-Mar-2022	15-Sep-2022	✓	25-Mar-2022	15-Sep-2022	✓
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
<b>Soil Glass Jar - Unpreserved (EG035T)</b>								
SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	24-Mar-2022	15-Apr-2022	✓	25-Mar-2022	15-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EG035T)</b>								
SX_OB_20220319_00_02_SS_Primary_ALS	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	24-Mar-2022	16-Apr-2022	✓	25-Mar-2022	16-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	
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>								
<b>Soil Glass Jar - Unpreserved (EG048G)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	24-Mar-2022	15-Apr-2022	✓	25-Mar-2022	31-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EG048G)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	24-Mar-2022	16-Apr-2022	✓	25-Mar-2022	31-Mar-2022	✓
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
<b>Soil Glass Jar - Unpreserved (EK026SF)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	24-Mar-2022	01-Apr-2022	✓	25-Mar-2022	07-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EK026SF)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	24-Mar-2022	02-Apr-2022	✓	25-Mar-2022	07-Apr-2022	✓
<b>EK040T: Fluoride Total</b>								
<b>Soil Glass Jar - Unpreserved (EK040T)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	24-Mar-2022	15-Apr-2022	✓	28-Mar-2022	15-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EK040T)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	24-Mar-2022	16-Apr-2022	✓	28-Mar-2022	16-Apr-2022	✓
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
<b>Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P)</b>								
SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	25-Mar-2022	14-Sep-2022	✓	----	----	----
<b>Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P)</b>								
SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	25-Mar-2022	15-Sep-2022	✓	----	----	----
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
<b>Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P)</b>								
SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	25-Mar-2022	14-Sep-2022	✓	----	----	----
<b>Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P)</b>								
SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	25-Mar-2022	15-Sep-2022	✓	----	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
<b>Soil Glass Jar - Unpreserved (EP066-EM)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	24-Mar-2022	01-Apr-2022	✓	24-Mar-2022	03-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP066-EM)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	24-Mar-2022	02-Apr-2022	✓	24-Mar-2022	03-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	
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	19-Mar-2022	25-Mar-2022	✓	21-Mar-2022	25-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	19-Mar-2022	26-Mar-2022	✓	21-Mar-2022	26-Mar-2022	✓
<b>EP074H: Naphthalene</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	19-Mar-2022	25-Mar-2022	✓	21-Mar-2022	25-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	19-Mar-2022	26-Mar-2022	✓	21-Mar-2022	26-Mar-2022	✓
<b>EP074I: Volatile Halogenated Compounds</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	19-Mar-2022	25-Mar-2022	✓	21-Mar-2022	25-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	19-Mar-2022	26-Mar-2022	✓	21-Mar-2022	26-Mar-2022	✓
<b>EP075A: Phenolic Compounds (Halogenated)</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	24-Mar-2022	01-Apr-2022	✓	24-Mar-2022	03-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	24-Mar-2022	02-Apr-2022	✓	24-Mar-2022	03-May-2022	✓
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	24-Mar-2022	01-Apr-2022	✓	24-Mar-2022	03-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	24-Mar-2022	02-Apr-2022	✓	24-Mar-2022	03-May-2022	✓
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	24-Mar-2022	01-Apr-2022	✓	24-Mar-2022	03-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	24-Mar-2022	02-Apr-2022	✓	24-Mar-2022	03-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	
<b>EP075I: Organochlorine Pesticides</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	24-Mar-2022	01-Apr-2022	✓	24-Mar-2022	03-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	24-Mar-2022	02-Apr-2022	✓	24-Mar-2022	03-May-2022	✓
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	19-Mar-2022	25-Mar-2022	✓	21-Mar-2022	25-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	24-Mar-2022	01-Apr-2022	✓	24-Mar-2022	03-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	19-Mar-2022	26-Mar-2022	✓	21-Mar-2022	26-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	24-Mar-2022	02-Apr-2022	✓	24-Mar-2022	03-May-2022	✓
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	19-Mar-2022	25-Mar-2022	✓	21-Mar-2022	25-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	24-Mar-2022	01-Apr-2022	✓	24-Mar-2022	03-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	19-Mar-2022	26-Mar-2022	✓	21-Mar-2022	26-Mar-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	24-Mar-2022	02-Apr-2022	✓	24-Mar-2022	03-May-2022	✓
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	22-Mar-2022	14-Sep-2022	✓	23-Mar-2022	01-May-2022	✓
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	22-Mar-2022	15-Sep-2022	✓	23-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	
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	22-Mar-2022	14-Sep-2022	✓	23-Mar-2022	01-May-2022	✓
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	22-Mar-2022	15-Sep-2022	✓	23-Mar-2022	01-May-2022	✓
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	22-Mar-2022	14-Sep-2022	✓	23-Mar-2022	01-May-2022	✓
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	22-Mar-2022	15-Sep-2022	✓	23-Mar-2022	01-May-2022	✓
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	22-Mar-2022	14-Sep-2022	✓	23-Mar-2022	01-May-2022	✓
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	22-Mar-2022	15-Sep-2022	✓	23-Mar-2022	01-May-2022	✓
<b>EP231P: PFAS Sums</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS,	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS	18-Mar-2022	22-Mar-2022	14-Sep-2022	✓	23-Mar-2022	01-May-2022	✓
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220319_00_02_SS_Primary_ALS,	SX_OB_20220319_04_07_SS_Primary_ALS	19-Mar-2022	22-Mar-2022	15-Sep-2022	✓	23-Mar-2022	01-May-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



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	
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_OB_20220318_08_40_SR_Rinsate_ALS,	SX_OB_20220318_08_41_SB_Blank_ALS	18-Mar-2022	24-Mar-2022	14-Sep-2022	✓	24-Mar-2022	14-Sep-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS, SX_OB_20220319_00_02_SS_Primary_ALS, SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS, SX_OB_20220319_04_07_SS_Primary_ALS, SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS,	25-Mar-2022	26-Mar-2022	21-Sep-2022	✓	26-Mar-2022	21-Sep-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220318_20_06_SS_Primary_ALS, SX_OB_20220319_04_07_SS_Primary_ALS	SX_OB_20220319_00_02_SS_Primary_ALS,	25-Mar-2022	28-Mar-2022	21-Sep-2022	✓	28-Mar-2022	21-Sep-2022	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_OB_20220318_08_40_SR_Rinsate_ALS,	SX_OB_20220318_08_41_SB_Blank_ALS	18-Mar-2022	24-Mar-2022	14-Sep-2022	✓	24-Mar-2022	14-Sep-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS, SX_OB_20220319_00_02_SS_Primary_ALS, SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS, SX_OB_20220319_04_07_SS_Primary_ALS, SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS,	25-Mar-2022	26-Mar-2022	21-Sep-2022	✓	26-Mar-2022	21-Sep-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220318_20_06_SS_Primary_ALS, SX_OB_20220319_04_07_SS_Primary_ALS	SX_OB_20220319_00_02_SS_Primary_ALS,	25-Mar-2022	28-Mar-2022	21-Sep-2022	✓	28-Mar-2022	21-Sep-2022	✓
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_OB_20220318_08_40_SR_Rinsate_ALS,	SX_OB_20220318_08_41_SB_Blank_ALS	18-Mar-2022	24-Mar-2022	14-Sep-2022	✓	24-Mar-2022	14-Sep-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS, SX_OB_20220319_00_02_SS_Primary_ALS, SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS, SX_OB_20220319_04_07_SS_Primary_ALS, SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS,	25-Mar-2022	26-Mar-2022	21-Sep-2022	✓	26-Mar-2022	21-Sep-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220318_20_06_SS_Primary_ALS, SX_OB_20220319_04_07_SS_Primary_ALS	SX_OB_20220319_00_02_SS_Primary_ALS,	25-Mar-2022	28-Mar-2022	21-Sep-2022	✓	28-Mar-2022	21-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	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_OB_20220318_08_40_SR_Rinsate_ALS,	SX_OB_20220318_08_41_SB_Blank_ALS	18-Mar-2022	24-Mar-2022	14-Sep-2022	✓	24-Mar-2022	14-Sep-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS, SX_OB_20220319_00_02_SS_Primary_ALS, SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS, SX_OB_20220319_04_07_SS_Primary_ALS, SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS,	25-Mar-2022	26-Mar-2022	21-Sep-2022	✓	26-Mar-2022	21-Sep-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220318_20_06_SS_Primary_ALS, SX_OB_20220319_04_07_SS_Primary_ALS	SX_OB_20220319_00_02_SS_Primary_ALS,	25-Mar-2022	28-Mar-2022	21-Sep-2022	✓	28-Mar-2022	21-Sep-2022	✓
<b>EP231P: PFAS Sums</b>								
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_OB_20220318_08_40_SR_Rinsate_ALS,	SX_OB_20220318_08_41_SB_Blank_ALS	18-Mar-2022	24-Mar-2022	14-Sep-2022	✓	24-Mar-2022	14-Sep-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS, SX_OB_20220319_00_02_SS_Primary_ALS, SX_OB_20220318_08_08_SS_Primary_ALS, SX_OB_20220318_12_11_SS_Primary_ALS, SX_OB_20220318_16_12_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS, SX_OB_20220318_20_06_SS_Primary_ALS, SX_OB_20220319_04_07_SS_Primary_ALS, SX_OB_20220318_08_09_SS_Duplicate_ALS, SX_OB_20220318_16_06_SS_Triplicate_ALS,	25-Mar-2022	26-Mar-2022	21-Sep-2022	✓	26-Mar-2022	21-Sep-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220318_20_06_SS_Primary_ALS, SX_OB_20220319_04_07_SS_Primary_ALS	SX_OB_20220319_00_02_SS_Primary_ALS,	25-Mar-2022	28-Mar-2022	21-Sep-2022	✓	28-Mar-2022	21-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	Reaural	Actual	Expected	Evaluation	
<b>Laboratory Duplicates (DUP)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
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
<b>Laboratory Control Samples (LCS)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
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
<b>Method Blanks (MB)</b>							
Deionised Water Leach - Plastic Leaching Vessel	EN60-DIa-P	2	26	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
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	Reular	Actual	Expected	Evaluation	
<b>Analytical Methods</b>							
<b>Matrix Spikes (MS)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
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	Reular	Actual	Expected	Evaluation	
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	7	64	10.94	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	5	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	64	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	64	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	64	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	5	20.00	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 <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> ) (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 <sub>2</sub> 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 soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-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 <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> SO <sub>4</sub> 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.

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NATA Accredited  
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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 **872310-S**  
Project name **20220318043419-Eurofin-12**  
Project ID **JC0927**  
Received Date **Mar 18, 2022**

Client Sample ID			SX_IB_202203 17_07_54_SS TriPLICATE_EUF	SX_IB_202203 17_08_03_SS Primary_EUF	SX_OB_20220 317_11_58_SS _Primary_EUF	SX_OB_20220 317_16_02_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma36468	M22-Ma36469	M22-Ma36470	M22-Ma36471
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
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 <sup>N02</sup>	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) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	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
<b>Volatile Organics</b>						
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
<b>Volatile Organics</b>						
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_IB_202203 17_07_54_SS TriPLICATE_EUF	SX_IB_202203 17_08_03_SS Primary_EUF	SX_OB_20220 317_11_58_SS _Primary_EUF	SX_OB_20220 317_16_02_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma36468	M22-Ma36469	M22-Ma36470	M22-Ma36471
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
<b>Volatile Organics</b>						
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	%	63	52	59	65
Toluene-d8 (surr.)	1	%	93	72	84	98
<b>Polycyclic Aromatic Hydrocarbons</b>						
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_IB_202203 17_07_54_SS Triplicate_EUF	SX_IB_202203 17_08_03_SS Primary_EUF	SX_OB_20220 317_11_58_SS _Primary_EUF	SX_OB_20220 317_16_02_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma36468	M22-Ma36469	M22-Ma36470	M22-Ma36471
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
<b>Polycyclic Aromatic Hydrocarbons</b>						
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 <sup>N07</sup>	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	%	133	68	139	54
p-Terphenyl-d14 (surr.)	1	%	122	76	124	66
<b>Organochlorine Pesticides</b>						
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	%	108	68	130	67
Tetrachloro-m-xylene (surr.)	1	%	120	87	125	76



Client Sample ID			SX_IB_202203 17_07_54_SS TriPLICATE_EUF	SX_IB_202203 17_08_03_SS Primary_EUF	SX_OB_20220 317_11_58_SS _Primary_EUF	SX_OB_20220 317_16_02_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma36468	M22-Ma36469	M22-Ma36470	M22-Ma36471
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
<b>Polychlorinated Biphenyls</b>						
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	%	108	68	130	67
Tetrachloro-m-xylene (surr.)	1	%	120	87	125	76
<b>Phenols (Halogenated)</b>						
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
<b>Phenols (non-Halogenated)</b>						
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	%	121	83	132	64
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
<b>Chromium (hexavalent)</b>						
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
<b>Cyanide (total)</b>						
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
<b>Fluoride (Total)</b>						
Fluoride (Total)	100	mg/kg	< 100	< 100	< 100	< 100
<b>pH (1:5 Aqueous extract at 25°C as rec.)</b>						
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	9.0	8.9	9.5	9.6
<b>% Moisture</b>						
% Moisture	1	%	30	28	32	28
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	28	25	43	37
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	110	130	130	120
Copper	5	mg/kg	73	75	72	61
Lead	5	mg/kg	5.0	5.5	6.0	< 5
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_IB_202203 17_07_54_SS TriPLICATE_EUF	SX_IB_202203 17_08_03_SS Primary_EUF	SX_OB_20220 317_11_58_SS _Primary_EUF	SX_OB_20220 317_16_02_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma36468	M22-Ma36469	M22-Ma36470	M22-Ma36471
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Nickel	5	mg/kg	180	200	230	200
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	140	140	170	130
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	75	73	75	79
13C5-PFPeA (surr.)	1	%	73	84	77	79
13C5-PFHxA (surr.)	1	%	83	72	85	76
13C4-PFHpA (surr.)	1	%	80	81	80	94
13C8-PFOA (surr.)	1	%	87	86	80	85
13C5-PFNA (surr.)	1	%	79	82	102	94
13C6-PFDA (surr.)	1	%	63	96	68	108
13C2-PFUnDA (surr.)	1	%	87	98	91	106
13C2-PFDoDA (surr.)	1	%	110	97	104	108
13C2-PFTeDA (surr.)	1	%	91	77	85	86
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	85	74	89	86
D3-N-MeFOSA (surr.)	1	%	104	99	101	113
D5-N-EtFOSA (surr.)	1	%	137	111	138	128
D7-N-MeFOSE (surr.)	1	%	87	78	93	90
D9-N-EtFOSE (surr.)	1	%	93	81	92	88
D5-N-EtFOSAA (surr.)	1	%	87	100	76	128
D3-N-MeFOSAA (surr.)	1	%	90	84	77	99

Client Sample ID			SX_IB_202203 17_07_54_SS TriPLICATE_EUF	SX_IB_202203 17_08_03_SS Primary_EUF	SX_OB_20220 317_11_58_SS _Primary_EUF	SX_OB_20220 317_16_02_SS _Primary_EUF
<b>Sample Matrix</b>			Soil	Soil	Soil	Soil
<b>Eurofins Sample No.</b>			M22-Ma36468	M22-Ma36469	M22-Ma36470	M22-Ma36471
<b>Date Sampled</b>			Mar 17, 2022	Mar 17, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	70	83	76	96
18O2-PFHxS (surr.)	1	%	63	99	67	91
13C8-PFOS (surr.)	1	%	64	67	69	93
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	55	96	56	122
13C2-6:2 FTSA (surr.)	1	%	55	55	59	70
13C2-8:2 FTSA (surr.)	1	%	134	85	75	100
13C2-10:2 FTSA (surr.)	1	%	81	90	72	110
<b>PFASs Summations</b>						
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_OB_20220 317_16_02_SS Duplicate_EUF	SX_OB_20220 317_19_50_SS _Primary_EUF	SX_OB_20220 318_00_06_SS _Primary_EUF	SX_OB_20220 318_03_55_SS _Primary_EUF
<b>Sample Matrix</b>			Soil	Soil	Soil	Soil
<b>Eurofins Sample No.</b>			M22-Ma36472	M22-Ma36475	M22-Ma36476	M22-Ma36477
<b>Date Sampled</b>			Mar 17, 2022	Mar 17, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
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 <sup>N02</sup>	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) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			SX_OB_20220 317_16_02_SS Duplicate_EU F	SX_OB_20220 317_19_50_SS Primary_EUF	SX_OB_20220 318_00_06_SS Primary_EUF	SX_OB_20220 318_03_55_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma36472	M22-Ma36475	M22-Ma36476	M22-Ma36477
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	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
<b>Volatile Organics</b>						
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
<b>Volatile Organics</b>						
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

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma36472	M22-Ma36475	M22-Ma36476	M22-Ma36477
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Volatile Organics</b>						
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	%	61	56	57	62
Toluene-d8 (surr.)	1	%	92	82	85	55
<b>Polycyclic Aromatic Hydrocarbons</b>						
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 <sup>N07</sup>	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	%	65	52	66	138
p-Terphenyl-d14 (surr.)	1	%	76	57	76	120
<b>Organochlorine Pesticides</b>						
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

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma36472	M22-Ma36475	M22-Ma36476	M22-Ma36477
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Organochlorine Pesticides</b>						
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
Dibutylchlorendate (surr.)	1	%	75	55	76	131
Tetrachloro-m-xylene (surr.)	1	%	84	63	84	127
<b>Polychlorinated Biphenyls</b>						
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
Dibutylchlorendate (surr.)	1	%	75	55	76	131
Tetrachloro-m-xylene (surr.)	1	%	84	63	84	127
<b>Phenols (Halogenated)</b>						
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

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma36472	M22-Ma36475	M22-Ma36476	M22-Ma36477
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Phenols (non-Halogenated)</b>						
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	%	72	59	75	124
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
<b>Chromium (hexavalent)</b>						
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
<b>Cyanide (total)</b>						
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
<b>Fluoride (Total)</b>						
Fluoride (Total)	100	mg/kg	< 100	< 100	< 100	< 100
<b>pH (1:5 Aqueous extract at 25°C as rec.)</b>						
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	9.7	9.3	9.8	7.6
<b>% Moisture</b>						
% Moisture	1	%	23	32	32	28
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	42	46	50	44
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	120	130	120	110
Copper	5	mg/kg	68	73	78	68
Lead	5	mg/kg	< 5	5.6	< 5	< 5
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	230	190	220	210
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	140	130	130	130
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTTeDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	74	83	79	74
13C5-PFPeA (surr.)	1	%	89	99	92	76
13C5-PFHxA (surr.)	1	%	72	83	75	77

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma36472	M22-Ma36475	M22-Ma36476	M22-Ma36477
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
13C4-PFHpA (surr.)	1	%	80	94	97	77
13C8-PFOA (surr.)	1	%	78	96	82	68
13C5-PFNA (surr.)	1	%	77	116	105	84
13C6-PFDA (surr.)	1	%	92	105	90	61
13C2-PFUnDA (surr.)	1	%	99	114	101	89
13C2-PFDoDA (surr.)	1	%	105	113	102	105
13C2-PFTeDA (surr.)	1	%	82	93	89	78
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	81	85	80	84
D3-N-MeFOSA (surr.)	1	%	102	118	117	102
D5-N-EtFOSA (surr.)	1	%	116	135	126	132
D7-N-MeFOSE (surr.)	1	%	82	95	86	87
D9-N-EtFOSE (surr.)	1	%	85	94	88	94
D5-N-EtFOSAA (surr.)	1	%	134	122	122	87
D3-N-MeFOSAA (surr.)	1	%	92	98	81	86
<b>Perfluoroalkyl sulfonic acids (PFsAs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	91	103	97	73
18O2-PFHxS (surr.)	1	%	96	101	98	78
13C8-PFOS (surr.)	1	%	84	104	91	59
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTsAs)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	100	110	136	76
13C2-6:2 FTSA (surr.)	1	%	59	60	68	54



Client Sample ID			SX_OB_20220 317_16_02_SS _Duplicate_EU F	SX_OB_20220 317_19_50_SS _Primary_EUF	SX_OB_20220 318_00_06_SS _Primary_EUF	SX_OB_20220 318_03_55_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma36472	M22-Ma36475	M22-Ma36476	M22-Ma36477
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
13C2-8:2 FTSA (surr.)	1	%	84	112	91	120
13C2-10:2 FTSA (surr.)	1	%	96	98	88	82
<b>PFASs Summations</b>						
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 19, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Mar 19, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Mar 19, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	Mar 19, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	Mar 19, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 19, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	Mar 19, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	Mar 19, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 19, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 19, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	Mar 19, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	Mar 19, 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 21, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Mar 19, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	Mar 19, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Mar 18, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 19, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 19, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 19, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 19, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 18, 2022	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Mar 18, 2022 12:35 PM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	872310	<b>Due:</b>	Mar 25, 2022
<b>Project Name:</b>	20220318043419-Eurofin-12	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	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_IB_20220317_07_54_SS_Triplicate_EU F	Mar 17, 2022	7:54AM	Soil	M22-Ma36468		X	X	X
2	SX_IB_20220317_08_03_SS_Primary_EUF	Mar 17, 2022	8:03AM	Soil	M22-Ma36469		X	X	X
3	SX_OB_20220317_11_58_S_S_Primary_EU F	Mar 17, 2022	11:58AM	Soil	M22-Ma36470		X	X	X
4	SX_OB_20220	Mar 17, 2022	4:02PM	Soil	M22-Ma36471		X	X	X

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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFAS)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	317_16_02_S S_Primary_EU F								
5	SX_OB_20220 317_16_02_S S_Duplicate_E UF	Mar 17, 2022	4:02PM	Soil	M22-Ma36472		X	X	X
6	SX_OB_20220 317_16_17_S R_Rinsate_EU F	Mar 17, 2022	4:17PM	Water	M22-Ma36473			X	
7	SX_OB_20220 317_16_19_S B_Blank_EUF	Mar 17, 2022	4:19PM	Water	M22-Ma36474			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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
8	SX_OB_20220317_19_50_S_S_Primary_EU_F	Mar 17, 2022	7:50PM	Soil	M22-Ma36475		X	X	X
9	SX_OB_20220318_00_06_S_S_Primary_EU_F	Mar 18, 2022	12:06AM	Soil	M22-Ma36476		X	X	X
10	SX_OB_20220318_03_55_S_S_Primary_EU_F	Mar 18, 2022	3:55AM	Soil	M22-Ma36477		X	X	X
11	SX_IB_20220317_07_54_SS	Mar 17, 2022	7:54AM	AUS Leachate - pH 5.0	M22-Ma36478	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	_Triplicate_EU F								
12	SX_IB_20220317_08_03_SS_Primary_EUF	Mar 17, 2022	8:03AM	AUS Leachate - pH 5.0	M22-Ma36479	X		X	
13	SX_OB_20220317_11_58_SS_Primary_EUF	Mar 17, 2022	11:58AM	AUS Leachate - pH 5.0	M22-Ma36480	X		X	
14	SX_OB_20220317_16_02_SS_Primary_EUF	Mar 17, 2022	4:02PM	AUS Leachate - pH 5.0	M22-Ma36481	X		X	
15	SX_OB_20220	Mar 17, 2022	4:02PM	AUS Leachate	M22-Ma36482	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
15	SX_OB_20220 317_16_02_S S_Duplicate_E UF	Mar 17, 2022	4:02PM	AUS Leachate - pH 5.0	M22-Ma36482				
16	SX_OB_20220 317_19_50_S S_Primary_EU F	Mar 17, 2022	7:50PM	AUS Leachate - pH 5.0	M22-Ma36483	X		X	
17	SX_OB_20220 318_00_06_S S_Primary_EU F	Mar 18, 2022	12:06AM	AUS Leachate - pH 5.0	M22-Ma36484	X		X	
18	SX_OB_20220 318_03_55_S	Mar 18, 2022	3:55AM	AUS Leachate - pH 5.0	M22-Ma36485	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	S_Primary_EU F								
19	SX_IB_202203 17_07_54_SS _Triplicate_EU F	Mar 17, 2022	7:54AM	AUS Leachate - Reagent Water	M22-Ma36486	X		X	
20	SX_IB_202203 17_08_03_SS _Primary_EUF	Mar 17, 2022	8:03AM	AUS Leachate - Reagent Water	M22-Ma36487	X		X	
21	SX_OB_20220 317_11_58_S S_Primary_EU F	Mar 17, 2022	11:58AM	AUS Leachate - Reagent Water	M22-Ma36488	X		X	
22	SX_OB_20220	Mar 17, 2022	4:02PM	AUS Leachate	M22-Ma36489	X		X	



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<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
22	SX_OB_20220317_16_02_S_S_Primary_EU_F	Mar 17, 2022	4:02PM	AUS Leachate - Reagent Water	M22-Ma36489				
23	SX_OB_20220317_16_02_S_S_Duplicate_EU_F	Mar 17, 2022	4:02PM	AUS Leachate - Reagent Water	M22-Ma36490	X		X	
24	SX_OB_20220317_19_50_S_S_Primary_EU_F	Mar 17, 2022	7:50PM	AUS Leachate - Reagent Water	M22-Ma36491	X		X	
25	SX_OB_20220318_00_06_S	Mar 18, 2022	12:06AM	AUS Leachate - Reagent	M22-Ma36492	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	S_Primary_EU F			Water					
26	SX_OB_20220 318_03_55_S S_Primary_EU F	Mar 18, 2022	3:55AM	AUS Leachate - Reagent Water	M22-Ma36493	X		X	
<b>Test Counts</b>						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

<b>mg/kg:</b> milligrams per kilogram	<b>mg/L:</b> milligrams per litre	<b>µg/L:</b> micrograms per litre
<b>ppm:</b> parts per million	<b>ppb:</b> parts per billion	<b>%:</b> Percentage
<b>org/100 mL:</b> Organisms per 100 millilitres	<b>NTU:</b> Nephelometric Turbidity Units	<b>MPN/100 mL:</b> Most Probable Number of organisms per 100 millilitres

### Terms

<b>APHA</b>	American Public Health Association
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	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.
<b>NCP</b>	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.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>TBTO</b>	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.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 5.4
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	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
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons</b>							
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	
<b>Method Blank</b>							
<b>Volatile Organics</b>							
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Volatile Organics</b>							
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	
<b>Method Blank</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
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	
<b>Method Blank</b>							
<b>Organochlorine Pesticides</b>							
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	
<b>Method Blank</b>							
<b>Polychlorinated Biphenyls</b>							
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	
<b>Method Blank</b>							
<b>Phenols (Halogenated)</b>							
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	
<b>Method Blank</b>							
<b>Phenols (non-Halogenated)</b>							
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	
<b>Method Blank</b>							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Cyanide (total)	mg/kg	< 5			5	Pass	
Fluoride (Total)	mg/kg	< 100			100	Pass	
<b>Method Blank</b>							
<b>Heavy Metals</b>							
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	
<b>Method Blank</b>							
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>							
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	
<b>Method Blank</b>							
<b>Perfluoroalkyl sulfonamido substances</b>							
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	
<b>Method Blank</b>							
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>							
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	
<b>Method Blank</b>							
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>							
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	
<b>LCS - % Recovery</b>							
<b>Total Recoverable Hydrocarbons</b>							
TRH C6-C9	%	109			70-130	Pass	
TRH C10-C14	%	117			70-130	Pass	
Naphthalene	%	114			70-130	Pass	
TRH C6-C10	%	100			70-130	Pass	
TRH >C10-C16	%	114			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Volatile Organics</b>							
1.1-Dichloroethene	%	103			70-130	Pass	
1.1.1-Trichloroethane	%	95			70-130	Pass	
1.2-Dichlorobenzene	%	115			70-130	Pass	
1.2-Dichloroethane	%	111			70-130	Pass	
Benzene	%	109			70-130	Pass	
Ethylbenzene	%	117			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	120			70-130	Pass	
Toluene	%	111			70-130	Pass	
Trichloroethene	%	114			70-130	Pass	
Xylenes - Total*	%	118			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	%	95			70-130	Pass	
Acenaphthylene	%	90			70-130	Pass	
Anthracene	%	104			70-130	Pass	
Benz(a)anthracene	%	91			70-130	Pass	
Benzo(a)pyrene	%	95			70-130	Pass	
Benzo(b&i)fluoranthene	%	101			70-130	Pass	
Benzo(g,h,i)perylene	%	71			70-130	Pass	
Benzo(k)fluoranthene	%	115			70-130	Pass	
Chrysene	%	92			70-130	Pass	
Dibenz(a,h)anthracene	%	80			70-130	Pass	
Fluoranthene	%	107			70-130	Pass	
Fluorene	%	103			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	85			70-130	Pass	
Naphthalene	%	92			70-130	Pass	
Phenanthrene	%	98			70-130	Pass	
Pyrene	%	108			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Organochlorine Pesticides</b>							
Chlordanes - Total	%	79			70-130	Pass	
4,4'-DDD	%	86			70-130	Pass	
4,4'-DDE	%	109			70-130	Pass	
4,4'-DDT	%	97			70-130	Pass	
a-HCH	%	87			70-130	Pass	
Aldrin	%	108			70-130	Pass	
b-HCH	%	104			70-130	Pass	
d-HCH	%	101			70-130	Pass	
Dieldrin	%	108			70-130	Pass	
Endosulfan I	%	105			70-130	Pass	
Endosulfan II	%	100			70-130	Pass	
Endosulfan sulphate	%	95			70-130	Pass	
Endrin	%	113			70-130	Pass	
Endrin aldehyde	%	84			70-130	Pass	
Endrin ketone	%	84			70-130	Pass	
g-HCH (Lindane)	%	103			70-130	Pass	
Heptachlor	%	111			70-130	Pass	
Heptachlor epoxide	%	114			70-130	Pass	
Hexachlorobenzene	%	114			70-130	Pass	
Methoxychlor	%	121			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polychlorinated Biphenyls</b>							
Aroclor-1260	%	79			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Phenols (Halogenated)</b>							
2-Chlorophenol	%	93			25-140	Pass	
2,4-Dichlorophenol	%	98			25-140	Pass	
2,4,5-Trichlorophenol	%	106			25-140	Pass	
2,4,6-Trichlorophenol	%	91			25-140	Pass	
2,6-Dichlorophenol	%	93			25-140	Pass	



Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4-Chloro-3-methylphenol	%	94			25-140	Pass	
Pentachlorophenol	%	71			25-140	Pass	
Tetrachlorophenols - Total	%	107			25-140	Pass	
<b>LCS - % Recovery</b>							
<b>Phenols (non-Halogenated)</b>							
2-Methyl-4,6-dinitrophenol	%	74			25-140	Pass	
2-Nitrophenol	%	130			25-140	Pass	
2,4-Dimethylphenol	%	77			25-140	Pass	
2,4-Dinitrophenol	%	38			25-140	Pass	
2-Methylphenol (o-Cresol)	%	86			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	93			25-140	Pass	
4-Nitrophenol	%	123			25-140	Pass	
Dinoseb	%	105			25-140	Pass	
Phenol	%	94			25-140	Pass	
<b>LCS - % Recovery</b>							
Chromium (hexavalent)	%	93			70-130	Pass	
Cyanide (total)	%	84			70-130	Pass	
Fluoride (Total)	%	82			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Heavy Metals</b>							
Arsenic	%	106			80-120	Pass	
Cadmium	%	105			80-120	Pass	
Chromium	%	111			80-120	Pass	
Copper	%	109			80-120	Pass	
Lead	%	117			80-120	Pass	
Mercury	%	106			80-120	Pass	
Molybdenum	%	106			80-120	Pass	
Nickel	%	105			80-120	Pass	
Selenium	%	107			80-120	Pass	
Silver	%	110			80-120	Pass	
Tin	%	107			80-120	Pass	
Zinc	%	106			80-120	Pass	
<b>LCS - % Recovery</b>							
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>							
Perfluorobutanoic acid (PFBA)	%	96			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	81			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	88			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	80			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	105			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	115			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	109			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	101			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	93			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	121			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	91			50-150	Pass	
<b>LCS - % Recovery</b>							
<b>Perfluoroalkyl sulfonamido substances</b>							
Perfluorooctane sulfonamide (FOSA)	%	104			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	88			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	102			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	80			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	92			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	90			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	83			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	83			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	101			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	87			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	103			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	113			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	109			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	96			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	104			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	95			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	93			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	114			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	95			50-150	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Total Recoverable Hydrocarbons</b>				Result 1				
TRH C6-C9	M22-Ma38842	NCP	%	77		70-130	Pass	
TRH C10-C14	M22-Ma31027	NCP	%	114		70-130	Pass	
Naphthalene	M22-Ma38842	NCP	%	79		70-130	Pass	
TRH C6-C10	M22-Ma38842	NCP	%	86		70-130	Pass	
TRH >C10-C16	M22-Ma31027	NCP	%	110		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Volatile Organics</b>				Result 1				
1.1-Dichloroethene	M22-Ma38842	NCP	%	76		70-130	Pass	
1.1.1-Trichloroethane	M22-Ma38842	NCP	%	72		70-130	Pass	
1.2-Dichlorobenzene	M22-Ma38842	NCP	%	78		70-130	Pass	
1.2-Dichloroethane	M22-Ma38842	NCP	%	80		70-130	Pass	
Benzene	M22-Ma38842	NCP	%	73		70-130	Pass	
Ethylbenzene	M22-Ma38842	NCP	%	72		70-130	Pass	
m&p-Xylenes	M22-Ma38842	NCP	%	75		70-130	Pass	
o-Xylene	M22-Ma38842	NCP	%	74		70-130	Pass	
Toluene	M22-Ma38842	NCP	%	74		70-130	Pass	
Trichloroethene	M22-Ma38842	NCP	%	90		70-130	Pass	
Xylenes - Total*	M22-Ma38842	NCP	%	75		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1				
Acenaphthene	M22-Ma31324	NCP	%	83		70-130	Pass	
Acenaphthylene	M22-Ma31324	NCP	%	79		70-130	Pass	
Anthracene	M22-Ma31324	NCP	%	79		70-130	Pass	
Benz(a)anthracene	M22-Ma31324	NCP	%	74		70-130	Pass	
Benzo(a)pyrene	M22-Ma31324	NCP	%	76		70-130	Pass	
Benzo(b&j)fluoranthene	M22-Ma31324	NCP	%	73		70-130	Pass	
Benzo(g,h,i)perylene	M22-Ma31324	NCP	%	88		70-130	Pass	
Benzo(k)fluoranthene	M22-Ma31324	NCP	%	94		70-130	Pass	
Chrysene	M22-Ma31324	NCP	%	71		70-130	Pass	
Dibenz(a,h)anthracene	M22-Ma31324	NCP	%	97		70-130	Pass	
Fluoranthene	M22-Ma31324	NCP	%	88		70-130	Pass	
Fluorene	M22-Ma31324	NCP	%	87		70-130	Pass	
Indeno(1,2,3-cd)pyrene	M22-Ma31324	NCP	%	75		70-130	Pass	
Naphthalene	M22-Ma31324	NCP	%	82		70-130	Pass	
Phenanthrene	M22-Ma31324	NCP	%	84		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Pyrene	M22-Ma31324	NCP	%	88		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (Halogenated)</b>				Result 1				
2-Chlorophenol	M22-Ma31324	NCP	%	85		30-130	Pass	
2.4-Dichlorophenol	M22-Ma31324	NCP	%	95		30-130	Pass	
2.4.5-Trichlorophenol	M22-Ma31324	NCP	%	105		30-130	Pass	
2.4.6-Trichlorophenol	M22-Ma31324	NCP	%	89		30-130	Pass	
2.6-Dichlorophenol	M22-Ma31324	NCP	%	89		30-130	Pass	
4-Chloro-3-methylphenol	M22-Ma31324	NCP	%	94		30-130	Pass	
Pentachlorophenol	M22-Ma31324	NCP	%	105		30-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (non-Halogenated)</b>				Result 1				
2-Methyl-4.6-dinitrophenol	M22-Ma31324	NCP	%	125		30-130	Pass	
2-Nitrophenol	M22-Ma31324	NCP	%	124		30-130	Pass	
2.4-Dimethylphenol	M22-Ma31324	NCP	%	109		30-130	Pass	
2.4-Dinitrophenol	M22-Ma31324	NCP	%	147		30-130	Fail	Q08
2-Methylphenol (o-Cresol)	M22-Ma31324	NCP	%	89		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-Ma31324	NCP	%	92		30-130	Pass	
4-Nitrophenol	M22-Ma31324	NCP	%	128		30-130	Pass	
Dinoseb	M22-Ma31324	NCP	%	140		30-130	Fail	Q08
Phenol	M22-Ma31324	NCP	%	88		30-130	Pass	
<b>Spike - % Recovery</b>								
				Result 1				
Chromium (hexavalent)	M22-Ma19804	NCP	%	87		70-130	Pass	
Cyanide (total)	M22-Ma34701	NCP	%	95		70-130	Pass	
Fluoride (Total)	M22-Ma38818	NCP	%	91		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Nickel	M22-Ma38742	NCP	%	99		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Arsenic	M22-Ma36471	CP	%	108		75-125	Pass	
Cadmium	M22-Ma36471	CP	%	116		75-125	Pass	
Chromium	M22-Ma36471	CP	%	102		75-125	Pass	
Copper	M22-Ma36471	CP	%	110		75-125	Pass	
Lead	M22-Ma36471	CP	%	111		75-125	Pass	
Mercury	M22-Ma36471	CP	%	95		75-125	Pass	
Molybdenum	M22-Ma36471	CP	%	112		75-125	Pass	
Selenium	M22-Ma36471	CP	%	93		75-125	Pass	
Silver	M22-Ma36471	CP	%	120		75-125	Pass	
Tin	M22-Ma36471	CP	%	112		75-125	Pass	
Zinc	M22-Ma36471	CP	%	127		75-125	Fail	Q08
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1				
Perfluorobutanoic acid (PFBA)	M22-Ma36476	CP	%	98		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma36476	CP	%	81		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma36476	CP	%	94		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma36476	CP	%	91		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma36476	CP	%	99		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma36476	CP	%	105		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma36476	CP	%	100		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma36476	CP	%	103		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma36476	CP	%	104		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorotridecanoic acid (PFTrDA)	M22-Ma36476	CP	%	103			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma36476	CP	%	99			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1					
Perfluorooctane sulfonamide (FOSA)	M22-Ma36476	CP	%	99			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma36476	CP	%	99			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma36476	CP	%	97			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma36476	CP	%	107			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma36476	CP	%	94			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma36476	CP	%	87			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma36476	CP	%	120			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M22-Ma36476	CP	%	86			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ma36476	CP	%	109			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma36476	CP	%	93			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma36476	CP	%	94			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma36476	CP	%	94			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma36476	CP	%	69			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ma36476	CP	%	92			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ma36476	CP	%	95			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma36476	CP	%	92			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma36476	CP	%	75			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma36476	CP	%	92			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma36476	CP	%	87			50-150	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Organochlorine Pesticides</b>				Result 1	Result 2	RPD			
Heptachlor epoxide	M22-Ma47973	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
<b>Duplicate</b>									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	M22-Ma36468	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Cyanide (total)	M22-Ma34700	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Ma33161	NCP	pH Units	8.0	8.2	pass	30%	Pass	

Duplicate								
				Result 1	Result 2	RPD		
% Moisture	M22-Ma36469	CP	%	28	30	8.0	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C6-C9	M22-Ma36470	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C10-C14	M22-Ma36470	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M22-Ma36470	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M22-Ma36470	CP	mg/kg	< 50	< 50	<1	30%	Pass
Naphthalene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	M22-Ma36470	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH >C10-C16	M22-Ma36470	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M22-Ma36470	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M22-Ma36470	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Hexachlorobutadiene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1,1-Dichloroethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,4-Trichlorobenzene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1-Dichloroethene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,1-Trichloroethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,1,2-Tetrachloroethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,2-Trichloroethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,2,2-Tetrachloroethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dibromoethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dichlorobenzene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dichloroethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dichloropropane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,3-Trichloropropane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,4-Trimethylbenzene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3-Dichlorobenzene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3-Dichloropropane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3,5-Trimethylbenzene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,4-Dichlorobenzene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzene	M22-Ma36470	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Bromobenzene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1,2-Dichloroethene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1,3-Dichloropropene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Dibromomethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	M22-Ma36470	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	M22-Ma36470	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	M22-Ma36470	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	M22-Ma36470	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1,2-Dichloroethene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,3-Dichloropropene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total*	M22-Ma36470	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)anthracene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M22-Ma36470	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
<b>Organochlorine Pesticides</b>				Result 1	Result 2	RPD		
Hexachlorobenzene	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-Ma36470	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
<b>Polychlorinated Biphenyls</b>				Result 1	Result 2	RPD		
Aroclor-1016	M22-Ma36470	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-Ma36470	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-Ma36470	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-Ma36470	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-Ma36470	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-Ma36470	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-Ma36470	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-Ma36470	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
<b>Phenols (Halogenated)</b>				Result 1	Result 2	RPD		
2-Chlorophenol	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M22-Ma36470	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M22-Ma36470	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-Ma36470	CP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-Ma36470	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-Ma36470	CP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
<b>Phenols (non-Halogenated)</b>				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	M22-Ma36470	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M22-Ma36470	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-Ma36470	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	M22-Ma36470	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-Ma36470	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-Ma36470	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M22-Ma36470	CP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-Ma36470	CP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-Ma36470	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
<b>Heavy Metals</b>				Result 1	Result 2	RPD		
Arsenic	M22-Ma36471	CP	mg/kg	37	38	2.0	30%	Pass
Cadmium	M22-Ma36471	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M22-Ma36471	CP	mg/kg	120	120	3.0	30%	Pass
Copper	M22-Ma36471	CP	mg/kg	61	62	2.0	30%	Pass
Lead	M22-Ma36471	CP	mg/kg	< 5	< 5	<1	30%	Pass
Mercury	M22-Ma36471	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M22-Ma36471	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M22-Ma36471	CP	mg/kg	200	200	2.0	30%	Pass
Selenium	M22-Ma36471	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M22-Ma36471	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-Ma36471	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M22-Ma36471	CP	mg/kg	130	130	2.0	30%	Pass

Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma36475	CP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma36475	CP	ug/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma36475	CP	ug/kg	< 5	< 5	<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-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma36475	CP	ug/kg	< 10	< 10	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma36475	CP	ug/kg	< 5	< 5	<1	30%	Pass



Duplicate								
				Result 1	Result 2	RPD		
Fluoride (Total)	M22-Ma36476	CP	mg/kg	< 100	< 100	<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	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

**Qualifier Codes/Comments**

Code	Description
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).
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.

**Authorised by:**

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

## CERTIFICATE OF ANALYSIS

**Work Order** : **EM2204841**  
**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** : 20220319050418-ALS-12  
**Sampler** : Brandon, Toby  
**Site** : ----  
**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** : 19-Mar-2022 09:38  
**Date Analysis Commenced** : 19-Mar-2022  
**Issue Date** : 29-Mar-2022 10:46



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
Jarwis Nheu	Senior Inorganic Chemist	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.

- 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 EM2204534-007 due to sample matrix interference. Confirmed by re-analysis.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.
- 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_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS	SX_OB_20220318_12_11_SS_Primary_ALS	SX_OB_20220318_16_06_SS_Triplicate_ALS	SX_OB_20220318_16_12_SS_Primary_ALS
Sampling date / time				18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
Compound	CAS Number	LOR	Unit	EM2204841-001	EM2204841-002	EM2204841-005	EM2204841-006	EM2204841-007
				Result	Result	Result	Result	Result
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
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
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
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_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS	SX_OB_20220318_12_11_SS_Primary_ALS	SX_OB_20220318_16_06_SS_Triplicate_ALS	SX_OB_20220318_16_12_SS_Primary_ALS
Sampling date / time				18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
Compound	CAS Number	LOR	Unit	EM2204841-001	EM2204841-002	EM2204841-005	EM2204841-006	EM2204841-007
				Result	Result	Result	Result	Result
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
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
<b>EP231P: PFAS Sums</b>								
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
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	86.0	96.8	88.4	93.4	100.0
13C8-PFOA	----	0.02	%	106	107	107	107	106



## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220318_20_06_SS_Primary_ALS	SX_OB_20220319_00_02_SS_Primary_ALS	SX_OB_20220319_04_07_SS_Primary_ALS	----	----
Sampling date / time				18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	----	----
Compound	CAS Number	LOR	Unit	EM2204841-008	EM2204841-009	EM2204841-010	-----	-----
				Result	Result	Result	----	----
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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	----	----
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
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	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
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_20220318_20_06_SS_Primary_ALS	SX_OB_20220319_00_02_SS_Primary_ALS	SX_OB_20220319_04_07_SS_Primary_ALS	----	----
Sampling date / time				18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	----	----
Compound	CAS Number	LOR	Unit	EM2204841-008	EM2204841-009	EM2204841-010	-----	-----
				Result	Result	Result	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
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	----	----
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
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	----	----
<b>EP231P: PFAS Sums</b>								
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	----	----
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	94.8	78.1	89.5	----	----
13C8-PFOA	----	0.02	%	105	108	103	----	----





## Analytical Results

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

Sample ID

				SX_OB_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS	SX_OB_20220318_12_11_SS_Primary_ALS	SX_OB_20220318_16_06_SS_Triplicate_ALS	SX_OB_20220318_16_12_SS_Primary_ALS
Sampling date / time				18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
Compound	CAS Number	LOR	Unit	EM2204841-011	EM2204841-012	EM2204841-013	EM2204841-014	EM2204841-015
				Result	Result	Result	Result	Result
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
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
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
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: DI WATER LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS	SX_OB_20220318_12_11_SS_Primary_ALS	SX_OB_20220318_16_06_SS_Triplicate_ALS	SX_OB_20220318_16_12_SS_Primary_ALS
Sampling date / time				18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
Compound	CAS Number	LOR	Unit	EM2204841-011	EM2204841-012	EM2204841-013	EM2204841-014	EM2204841-015
				Result	Result	Result	Result	Result
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
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
<b>EP231P: PFAS Sums</b>								
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
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	84.0	79.7	81.6	89.6	80.1
13C8-PFOA	----	0.02	%	108	110	106	104	107



## Analytical Results

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

Sample ID

				SX_OB_20220318_20_06_SS_Primary_ALS	SX_OB_20220319_00_02_SS_Primary_ALS	SX_OB_20220319_04_07_SS_Primary_ALS	----	----
Sampling date / time				18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	----	----
Compound	CAS Number	LOR	Unit	EM2204841-016	EM2204841-017	EM2204841-018	-----	-----
				Result	Result	Result	----	----
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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	----	----
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
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	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
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: DI WATER LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220318_20_06_SS_Primary_ALS	SX_OB_20220319_00_02_SS_Primary_ALS	SX_OB_20220319_04_07_SS_Primary_ALS	----	----
Sampling date / time				18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	----	----
Compound	CAS Number	LOR	Unit	EM2204841-016	EM2204841-017	EM2204841-018	-----	-----
				Result	Result	Result	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
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	----	----
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
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	----	----
<b>EP231P: PFAS Sums</b>								
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	----	----
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	82.8	77.6	86.8	----	----
13C8-PFOA	----	0.02	%	105	100	101	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS	SX_OB_20220318_12_11_SS_Primary_ALS	SX_OB_20220318_16_06_SS_Triplicate_ALS	SX_OB_20220318_16_12_SS_Primary_ALS
Sampling date / time				18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
Compound	CAS Number	LOR	Unit	EM2204841-001	EM2204841-002	EM2204841-005	EM2204841-006	EM2204841-007
				Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
pH (CaCl <sub>2</sub> )	----	0.1	pH Unit	8.9	8.9	9.0	9.2	8.9
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	25.6	27.6	25.6	32.9	33.0
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	42	43	38	42	45
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	5	mg/kg	88	99	80	95	93
Copper	7440-50-8	5	mg/kg	56	61	50	68	54
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	169	171	140	141	132
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	98	102	83	98	89
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>								
Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
Total Cyanide	57-12-5	5	mg/kg	<5	<5	<5	<5	<5
<b>EK040T: Fluoride Total</b>								
Fluoride	16984-48-8	100	mg/kg	180	220	190	100	100
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Initial pH	----	0.1	pH Unit	9.4	8.5	9.8	9.7	9.6
After HCl pH	----	0.1	pH Unit	1.9	1.8	1.7	1.7	1.9
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	5.2	5.1
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>								
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_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS	SX_OB_20220318_12_11_SS_Primary_ALS	SX_OB_20220318_16_06_SS_Triplicate_ALS	SX_OB_20220318_16_12_SS_Primary_ALS
Sampling date / time				18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
Compound	CAS Number	LOR	Unit	EM2204841-001	EM2204841-002	EM2204841-005	EM2204841-006	EM2204841-007
				Result	Result	Result	Result	Result
<b>EP074A: Monocyclic Aromatic Hydrocarbons - Continued</b>								
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
<b>EP074H: Naphthalene</b>								
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
<b>EP074I: Volatile Halogenated Compounds</b>								
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
<b>EP075A: Phenolic Compounds (Halogenated)</b>								



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS	SX_OB_20220318_12_11_SS_Primary_ALS	SX_OB_20220318_16_06_SS_Triplicate_ALS	SX_OB_20220318_16_12_SS_Primary_ALS
Sampling date / time				18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
Compound	CAS Number	LOR	Unit	EM2204841-001	EM2204841-002	EM2204841-005	EM2204841-006	EM2204841-007
				Result	Result	Result	Result	Result
<b>EP075A: Phenolic Compounds (Halogenated) - Continued</b>								
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
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
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
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
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_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS	SX_OB_20220318_12_11_SS_Primary_ALS	SX_OB_20220318_16_06_SS_Triplicate_ALS	SX_OB_20220318_16_12_SS_Primary_ALS
Sampling date / time				18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
Compound	CAS Number	LOR	Unit	EM2204841-001	EM2204841-002	EM2204841-005	EM2204841-006	EM2204841-007
				Result	Result	Result	Result	Result
<b>EP075B: Polynuclear Aromatic Hydrocarbons - Continued</b>								
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	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>
<b>EP075I: Organochlorine Pesticides</b>								
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_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS	SX_OB_20220318_12_11_SS_Primary_ALS	SX_OB_20220318_16_06_SS_Triplicate_ALS	SX_OB_20220318_16_12_SS_Primary_ALS
Sampling date / time				18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
Compound	CAS Number	LOR	Unit	EM2204841-001	EM2204841-002	EM2204841-005	EM2204841-006	EM2204841-007
				Result	Result	Result	Result	Result
<b>EP075I: Organochlorine Pesticides - Continued</b>								
^ 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
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
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
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
>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
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS	SX_OB_20220318_12_11_SS_Primary_ALS	SX_OB_20220318_16_06_SS_Triplicate_ALS	SX_OB_20220318_16_12_SS_Primary_ALS
Sampling date / time				18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
Compound	CAS Number	LOR	Unit	EM2204841-001	EM2204841-002	EM2204841-005	EM2204841-006	EM2204841-007
				Result	Result	Result	Result	Result
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
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
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS	SX_OB_20220318_12_11_SS_Primary_ALS	SX_OB_20220318_16_06_SS_Triplicate_ALS	SX_OB_20220318_16_12_SS_Primary_ALS
Sampling date / time				18-Mar-2022 08:08	18-Mar-2022 08:09	18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12
Compound	CAS Number	LOR	Unit	EM2204841-001	EM2204841-002	EM2204841-005	EM2204841-006	EM2204841-007
				Result	Result	Result	Result	Result
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued</b>								
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
<b>EP231P: PFAS Sums</b>								
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
<b>EP066S: PCB Surrogate</b>								
Decachlorobiphenyl	2051-24-3	0.1	%	92.0	78.7	94.2	95.6	92.3
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	90.7	82.4	80.8	77.3	81.7
Toluene-D8	2037-26-5	0.1	%	94.0	85.8	84.4	80.7	84.2
4-Bromofluorobenzene	460-00-4	0.1	%	104	95.8	94.9	95.1	92.8
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>								
Phenol-d6	13127-88-3	0.025	%	104	90.1	110	110	111
2-Chlorophenol-D4	93951-73-6	0.025	%	95.9	83.1	100	100	100
2,4,6-Tribromophenol	118-79-6	0.025	%	91.1	80.3	95.8	94.6	97.6
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>								
Nitrobenzene-D5	4165-60-0	0.025	%	100	86.5	105	105	105
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	95.3	80.7	97.5	98.5	98.5
2-Fluorobiphenyl	321-60-8	0.025	%	101	86.4	104	104	105
Anthracene-d10	1719-06-8	0.025	%	105	90.8	108	108	99.7
4-Terphenyl-d14	1718-51-0	0.025	%	93.8	79.8	95.0	96.4	97.0
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.0002	%	96.2	113	88.6	105	97.8
13C8-PFOA	----	0.0002	%	96.3	102	106	99.1	106



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220318_20_06_SS_Primary_ALS	SX_OB_20220319_00_02_SS_Primary_ALS	SX_OB_20220319_04_07_SS_Primary_ALS	SX_OB_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS
Sampling date / time				18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	18-Mar-2022 08:08	18-Mar-2022 08:09
Compound	CAS Number	LOR	Unit	EM2204841-008	EM2204841-009	EM2204841-010	EM2204841-011	EM2204841-012
				Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
pH (CaCl2)	----	0.1	pH Unit	9.0	8.8	8.7	----	----
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	34.2	32.0	33.4	----	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	36	44	45	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	----
Chromium	7440-47-3	5	mg/kg	77	99	109	----	----
Copper	7440-50-8	5	mg/kg	38	57	54	----	----
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	115	152	141	----	----
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	67	102	85	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>								
Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	<1.0	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
Total Cyanide	57-12-5	5	mg/kg	<5	<5	<5	----	----
<b>EK040T: Fluoride Total</b>								
Fluoride	16984-48-8	100	mg/kg	100	120	<100	----	----
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Initial pH	----	0.1	pH Unit	9.7	9.6	9.5	----	----
After HCl pH	----	0.1	pH Unit	1.9	1.7	1.7	----	----
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	----	----
Final pH	----	0.1	pH Unit	5.1	5.1	5.1	----	----
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Final pH	----	0.1	pH Unit	----	----	----	10.1	10.1
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

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				SX_OB_20220318_20_06_SS_Primary_ALS	SX_OB_20220319_00_02_SS_Primary_ALS	SX_OB_20220319_04_07_SS_Primary_ALS	SX_OB_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS
Sampling date / time				18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	18-Mar-2022 08:08	18-Mar-2022 08:09
Compound	CAS Number	LOR	Unit	EM2204841-008	EM2204841-009	EM2204841-010	EM2204841-011	EM2204841-012
				Result	Result	Result	Result	Result
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>								
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	----	----
<b>EP074H: Naphthalene</b>								
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	----	----
<b>EP074I: Volatile Halogenated Compounds</b>								
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

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 (Matrix: SOIL)

Sample ID

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Sampling date / time				18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	18-Mar-2022 08:08	18-Mar-2022 08:09
Compound	CAS Number	LOR	Unit	EM2204841-008	EM2204841-009	EM2204841-010	EM2204841-011	EM2204841-012
				Result	Result	Result	Result	Result
<b>EP075A: Phenolic Compounds (Halogenated)</b>								
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	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
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	----	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
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

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Sampling date / time				18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	18-Mar-2022 08:08	18-Mar-2022 08:09
Compound	CAS Number	LOR	Unit	EM2204841-008	EM2204841-009	EM2204841-010	EM2204841-011	EM2204841-012
				Result	Result	Result	Result	Result
<b>EP075B: Polynuclear Aromatic Hydrocarbons - Continued</b>								
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	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	----	----
<b>EP075I: Organochlorine Pesticides</b>								
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	----	----



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Sample ID

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Sampling date / time				18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	18-Mar-2022 08:08	18-Mar-2022 08:09
Compound	CAS Number	LOR	Unit	EM2204841-008	EM2204841-009	EM2204841-010	EM2204841-011	EM2204841-012
				Result	Result	Result	Result	Result
<b>EP075I: Organochlorine Pesticides - Continued</b>								
^ 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	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
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	----	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
>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	----	----
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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	----	----





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 (Matrix: SOIL)

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Sampling date / time				18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	18-Mar-2022 08:08	18-Mar-2022 08:09
Compound	CAS Number	LOR	Unit	EM2204841-008	EM2204841-009	EM2204841-010	EM2204841-011	EM2204841-012
				Result	Result	Result	Result	Result
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
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	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
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	----	----
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220318_20_06_SS_Primary_ALS	SX_OB_20220319_00_02_SS_Primary_ALS	SX_OB_20220319_04_07_SS_Primary_ALS	SX_OB_20220318_08_08_SS_Primary_ALS	SX_OB_20220318_08_09_SS_Duplicate_ALS
Sampling date / time				18-Mar-2022 20:06	19-Mar-2022 00:02	19-Mar-2022 04:07	18-Mar-2022 08:08	18-Mar-2022 08:09
Compound	CAS Number	LOR	Unit	EM2204841-008	EM2204841-009	EM2204841-010	EM2204841-011	EM2204841-012
				Result	Result	Result	Result	Result
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued</b>								
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	----	----
<b>EP231P: PFAS Sums</b>								
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	----	----
<b>EP066S: PCB Surrogate</b>								
Decachlorobiphenyl	2051-24-3	0.1	%	93.9	121	92.5	----	----
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	68.3	82.9	76.6	----	----
Toluene-D8	2037-26-5	0.1	%	69.0	84.3	78.2	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	79.3	94.8	91.9	----	----
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>								
Phenol-d6	13127-88-3	0.025	%	106	112	116	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%	98.0	118	106	----	----
2,4,6-Tribromophenol	118-79-6	0.025	%	108	136	80.4	----	----
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>								
Nitrobenzene-D5	4165-60-0	0.025	%	97.7	133	119	----	----
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	96.8	106	105	----	----
2-Fluorobiphenyl	321-60-8	0.025	%	108	109	91.7	----	----
Anthracene-d10	1719-06-8	0.025	%	114	134	113	----	----
4-Terphenyl-d14	1718-51-0	0.025	%	100	125	99.4	----	----
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.0002	%	106	112	92.0	----	----
13C8-PFOA	----	0.0002	%	107	109	101	----	----



**Analytical Results**

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220318_12_11_SS_Primary_ALS	SX_OB_20220318_16_06_SS_Triplicate_ALS	SX_OB_20220318_16_12_SS_Primary_ALS	SX_OB_20220318_20_06_SS_Primary_ALS	SX_OB_20220319_00_02_SS_Primary_ALS
Sampling date / time				18-Mar-2022 12:11	18-Mar-2022 16:06	18-Mar-2022 16:12	18-Mar-2022 20:06	19-Mar-2022 00:02
Compound	CAS Number	LOR	Unit	EM2204841-013	EM2204841-014	EM2204841-015	EM2204841-016	EM2204841-017
				Result	Result	Result	Result	Result
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Final pH	----	0.1	pH Unit	10.3	10.3	10.1	10.2	10.0



**Analytical Results**

Sub-Matrix: <b>SOIL</b> (Matrix: <b>SOIL</b> )			Sample ID	<b>SX_OB_20220319_04 _07_SS_Primary_ALS</b>	----	----	----	----
			Sampling date / time	19-Mar-2022 04:07	----	----	----	----
Compound	CAS Number	LOR	Unit	<b>EM2204841-018</b>	-----	-----	-----	-----
				Result	----	----	----	----
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
<b>Final pH</b>	----	0.1	pH Unit	<b>9.7</b>	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID		SX_OB_20220318_08 _40_SR_Rinsate_ALS	SX_OB_20220318_08 _41_SB_Blank_ALS	----	----	----
Sampling date / time		18-Mar-2022 08:40		18-Mar-2022 08:41		----	----	----
Compound	CAS Number	LOR	Unit	EM2204841-003	EM2204841-004	-----	-----	-----
				Result	Result	---	---	---
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
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	----	----	----
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
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	----	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	----	----	----
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_20220318_08 _40_SR_Rinsate_ALS	SX_OB_20220318_08 _41_SB_Blank_ALS	----	----	----
Sampling date / time				18-Mar-2022 08:40	18-Mar-2022 08:41	----	----	----	
Compound	CAS Number	LOR	Unit	EM2204841-003	EM2204841-004	-----	-----	-----	
				Result	Result	---	---	---	
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>									
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	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	----	----	----	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>									
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	----	----	----	
<b>EP231P: PFAS Sums</b>									
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	----	----	----	
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)	----	0.05	µg/L	<0.05	<0.05	----	----	----	
<b>EP231S: PFAS Surrogate</b>									
13C4-PFOS	----	0.02	%	115	93.7	----	----	----	
13C8-PFOA	----	0.02	%	100	99.0	----	----	----	



## Surrogate Control Limits

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

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

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP066S: PCB Surrogate</b>			
Decachlorobiphenyl	2051-24-3	41	122
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>			
1,2-Dichloroethane-D4	17060-07-0	59	119
Toluene-D8	2037-26-5	55	117
4-Bromofluorobenzene	460-00-4	59	123
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>			
Phenol-d6	13127-88-3	63	134
2-Chlorophenol-D4	93951-73-6	60	125
2,4,6-Tribromophenol	118-79-6	54	129
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>			
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
<b>EP231S: PFAS Surrogate</b>			
13C4-PFOS	----	68	136
13C8-PFOA	----	69	133

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

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



NATA Accredited  
Accreditation Number 1261  
Site Number 1254

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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 **872310-W**  
Project name **20220318043419-Eurofin-12**  
Project ID **JC0927**  
Received Date **Mar 18, 2022**

Client Sample ID			SX_OB_20220 317_16_17_SR _Rinsate_EUF	SX_OB_20220 317_16_19_SB _Blank_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22-Ma36473	M22-Ma36474
Date Sampled			Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit		
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	70	78
13C5-PFPeA (surr.)	1	%	90	117
13C5-PFHxA (surr.)	1	%	85	122
13C4-PFHpA (surr.)	1	%	68	90
13C8-PFOA (surr.)	1	%	65	89
13C5-PFNA (surr.)	1	%	64	123
13C6-PFDA (surr.)	1	%	76	87
13C2-PFUnDA (surr.)	1	%	66	27
13C2-PFDoDA (surr.)	1	%	56	14
13C2-PFTeDA (surr.)	1	%	37	18
<b>Perfluoroalkyl sulfonamido substances</b>				
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	101	36
D3-N-MeFOSA (surr.)	1	%	85	15



Client Sample ID			SX_OB_20220 317_16_17_SR _Rinsate_EUF	SX_OB_20220 317_16_19_SB _Blank_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22-Ma36473	M22-Ma36474
Date Sampled			Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit		
<b>Perfluoroalkyl sulfonamido substances</b>				
D5-N-EtFOSA (surr.)	1	%	105	17
D7-N-MeFOSE (surr.)	1	%	85	19
D9-N-EtFOSE (surr.)	1	%	82	12
D5-N-EtFOSAA (surr.)	1	%	28	15
D3-N-MeFOSAA (surr.)	1	%	27	14
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>				
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	80	102
18O2-PFHxS (surr.)	1	%	70	83
13C8-PFOS (surr.)	1	%	80	112
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	53	139
13C2-6:2 FTSA (surr.)	1	%	65	157
13C2-8:2 FTSA (surr.)	1	%	72	113
13C2-10:2 FTSA (surr.)	1	%	44	11
<b>PFASs Summations</b>				
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 18, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Mar 18, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Mar 18, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Mar 18, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Mar 18, 2022	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Mar 18, 2022 12:35 PM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	872310	<b>Due:</b>	Mar 25, 2022
<b>Project Name:</b>	20220318043419-Eurofin-12	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	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_IB_20220317_07_54_SS_Triplicate_EU F	Mar 17, 2022	7:54AM	Soil	M22-Ma36468		X	X	X
2	SX_IB_20220317_08_03_SS_Primary_EUF	Mar 17, 2022	8:03AM	Soil	M22-Ma36469		X	X	X
3	SX_OB_20220317_11_58_S_S_Primary_EU F	Mar 17, 2022	11:58AM	Soil	M22-Ma36470		X	X	X
4	SX_OB_20220	Mar 17, 2022	4:02PM	Soil	M22-Ma36471		X	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	317_16_02_S S_Primary_EU F								
5	SX_OB_20220 317_16_02_S S_Duplicate_E UF	Mar 17, 2022	4:02PM	Soil	M22-Ma36472		X	X	X
6	SX_OB_20220 317_16_17_S R_Rinsate_EU F	Mar 17, 2022	4:17PM	Water	M22-Ma36473			X	
7	SX_OB_20220 317_16_19_S B_Blank_EUF	Mar 17, 2022	4:19PM	Water	M22-Ma36474			X	

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<b>Project Name:</b>	20220318043419-Eurofin-12	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
8	SX_OB_20220317_19_50_S_S_Primary_EU_F	Mar 17, 2022	7:50PM	Soil	M22-Ma36475		X	X	X
9	SX_OB_20220318_00_06_S_S_Primary_EU_F	Mar 18, 2022	12:06AM	Soil	M22-Ma36476		X	X	X
10	SX_OB_20220318_03_55_S_S_Primary_EU_F	Mar 18, 2022	3:55AM	Soil	M22-Ma36477		X	X	X
11	SX_IB_20220317_07_54_SS	Mar 17, 2022	7:54AM	AUS Leachate - pH 5.0	M22-Ma36478	X		X	

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**Order No.:**  
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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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	_Triplicate_EU F								
12	SX_IB_20220317_08_03_SS_Primary_EUF	Mar 17, 2022	8:03AM	AUS Leachate - pH 5.0	M22-Ma36479	X		X	
13	SX_OB_20220317_11_58_SS_Primary_EUF	Mar 17, 2022	11:58AM	AUS Leachate - pH 5.0	M22-Ma36480	X		X	
14	SX_OB_20220317_16_02_SS_Primary_EUF	Mar 17, 2022	4:02PM	AUS Leachate - pH 5.0	M22-Ma36481	X		X	
15	SX_OB_20220	Mar 17, 2022	4:02PM	AUS Leachate	M22-Ma36482	X		X	

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<b>Project Name:</b>	20220318043419-Eurofin-12	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
15	SX_OB_20220 317_16_02_S S_Duplicate_E UF	Mar 17, 2022	4:02PM	AUS Leachate - pH 5.0	M22-Ma36482				
16	SX_OB_20220 317_19_50_S S_Primary_EU F	Mar 17, 2022	7:50PM	AUS Leachate - pH 5.0	M22-Ma36483	X		X	
17	SX_OB_20220 318_00_06_S S_Primary_EU F	Mar 18, 2022	12:06AM	AUS Leachate - pH 5.0	M22-Ma36484	X		X	
18	SX_OB_20220 318_03_55_S	Mar 18, 2022	3:55AM	AUS Leachate - pH 5.0	M22-Ma36485	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	S_Primary_EU F								
19	SX_IB_202203 17_07_54_SS _Triplicate_EU F	Mar 17, 2022	7:54AM	AUS Leachate - Reagent Water	M22-Ma36486	X		X	
20	SX_IB_202203 17_08_03_SS _Primary_EUF	Mar 17, 2022	8:03AM	AUS Leachate - Reagent Water	M22-Ma36487	X		X	
21	SX_OB_20220 317_11_58_S S_Primary_EU F	Mar 17, 2022	11:58AM	AUS Leachate - Reagent Water	M22-Ma36488	X		X	
22	SX_OB_20220	Mar 17, 2022	4:02PM	AUS Leachate	M22-Ma36489	X		X	



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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
22	SX_OB_20220317_16_02_S_S_Primary_EU_F	Mar 17, 2022	4:02PM	AUS Leachate - Reagent Water	M22-Ma36489				
23	SX_OB_20220317_16_02_S_S_Duplicate_EUF	Mar 17, 2022	4:02PM	AUS Leachate - Reagent Water	M22-Ma36490	X		X	
24	SX_OB_20220317_19_50_S_S_Primary_EU_F	Mar 17, 2022	7:50PM	AUS Leachate - Reagent Water	M22-Ma36491	X		X	
25	SX_OB_20220318_00_06_S	Mar 18, 2022	12:06AM	AUS Leachate - Reagent	M22-Ma36492	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	S_Primary_EU F			Water					
26	SX_OB_20220 318_03_55_S S_Primary_EU F	Mar 18, 2022	3:55AM	AUS Leachate - Reagent Water	M22-Ma36493	X		X	
<b>Test Counts</b>						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

<b>mg/kg:</b> milligrams per kilogram	<b>mg/L:</b> milligrams per litre	<b>µg/L:</b> micrograms per litre
<b>ppm:</b> parts per million	<b>ppb:</b> parts per billion	<b>%:</b> Percentage
<b>org/100 mL:</b> Organisms per 100 millilitres	<b>NTU:</b> Nephelometric Turbidity Units	<b>MPN/100 mL:</b> Most Probable Number of organisms per 100 millilitres

### Terms

<b>APHA</b>	American Public Health Association
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	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.
<b>NCP</b>	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.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>TBTO</b>	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.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 5.4
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	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
<b>Method Blank</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
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	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonamido substances</b>						
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	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
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	
<b>Method Blank</b>						
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
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	
<b>LCS - % Recovery</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA)	%	83		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	110		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	95		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	93		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	100		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	93		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	89		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	100		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	102		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	114		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	113		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>								
Perfluorooctane sulfonamide (FOSA)	%	103			50-150	Pass		
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	146			50-150	Pass		
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	128			50-150	Pass		
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	98			50-150	Pass		
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	100			50-150	Pass		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	89			50-150	Pass		
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	87			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	81			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	70			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	106			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	99			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	89			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	93			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	88			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	54			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)</b>								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	98			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	146			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	88			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	119			50-150	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>								
Perfluorobutanoic acid (PFBA)	N22-Ma27822	NCP	%	83		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	N22-Ma27822	NCP	%	95		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	N22-Ma27822	NCP	%	86		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	N22-Ma27822	NCP	%	85		50-150	Pass	
Perfluorooctanoic acid (PFOA)	N22-Ma27822	NCP	%	90		50-150	Pass	
Perfluorononanoic acid (PFNA)	N22-Ma27822	NCP	%	86		50-150	Pass	
Perfluorodecanoic acid (PFDA)	N22-Ma27822	NCP	%	98		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	N22-Ma27822	NCP	%	88		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	N22-Ma27822	NCP	%	95		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	N22-Ma27822	NCP	%	111		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	N22-Ma27822	NCP	%	97		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>								
Perfluorooctane sulfonamide (FOSA)	N22-Ma27822	NCP	%	94		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	N22-Ma27822	NCP	%	89		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	N22-Ma27822	NCP	%	105		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N22-Ma27822	NCP	%	92		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	N22-Ma27822	NCP	%	92		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	N22-Ma27822	NCP	%	90			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	N22-Ma27822	NCP	%	86			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>				Result 1					
Perfluorobutanesulfonic acid (PFBS)	N22-Ma27822	NCP	%	81			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	N22-Ma27822	NCP	%	69			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	N22-Ma27822	NCP	%	105			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	N22-Ma27822	NCP	%	81			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	N22-Ma27822	NCP	%	81			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	N22-Ma27822	NCP	%	82			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	N22-Ma27822	NCP	%	94			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	N22-Ma27822	NCP	%	51			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	N22-Ma27822	NCP	%	96			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	N22-Ma27822	NCP	%	94			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	N22-Ma27822	NCP	%	86			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	N22-Ma27822	NCP	%	79			50-150	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M22-Ma25011	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTTrDA)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

<b>Duplicate</b>								
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ma25011	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma25011	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma25011	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma25011	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma25011	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma25011	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma25011	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
<b>Duplicate</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
<b>Duplicate</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma25011	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma25011	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma25011	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	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

## Qualifier Codes/Comments

Code	Description
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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**CHAIN OF CUSTODY RECORD**

Melbourne Laboratory  
 61 Mooney Road, Dandenong South VIC 3175  
 03 9594 5000 EnviroSampleVIC@eurofins.com

Perth Laboratory  
 Unit 2 31 Leach Highway, Kewdale WA 6105  
 08 9251 9600 EnviroSampleWA@eurofins.com

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

Sydney Laboratory  
 Unit F3 Bulfinch Lane, Cove West NSW 2046  
 02 9902 8400 EnviroSampleNSW@eurofins.com

AGON Environmental - Tunnel Spoil Testing  
 Unit H76, 63-65 Turner St, Port Melbourne VIC 3207

Company	Address	Contact Name	Phone No	Special Directions	Purchase Order	Quote ID No	Client Sample ID	Sampled Date/Time	Matrix	Project No	Project Name	Project Manager	Sampler(s)	Handed over by	Method of Shipment	Courier (#)	Received By	Received By	Date	Date	Time	Time	Temperature	Report No					
AGON Environmental - Tunnel Spoil Testing	Unit H76, 63-65 Turner St, Port Melbourne VIC 3207	Craig Trimbur David Lawson	+61 400 826 907 (Craig) +61 490 411 004 (David)	Please provide an interim lab report if final report has not been provided by 14 days from sample receipt. Please provide eSRN along with other sample receipt documentation.		Agon WGTP TST				JC0827	20220319045144-Eurofin-12	Craig Trimbur Esdad	Brandon - Agon Enviro Toby - Agon Enviro	finance@agonenviro.com.au LabReports.TST@agonenviro.com.au agonenvironmental@esdat.com.au mothertubresults@wtp.com.au	Handed over by														
<p>Where metals are requested, please specify "Cr" or "Filter"                  Sulfate WGTPT-TRH PAH Phenol/COP/CB/VOC/Vinyl Chloride                  Metals (As, Cd, Cr, Cu, Ni, Pb, Hg, Ag, Sn, Mo, Se, Zn) Cr+ 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</p>										<p>Containers: Change container type &amp; size if necessary.                  Required Turnaround Time (TAT): Default will be 5 days if not boxed.                  * Surcharge will apply                  Overnight (reporting by 9am) <input type="checkbox"/>                  Same day <input type="checkbox"/> 1 day <input checked="" type="checkbox"/>                  2 days <input type="checkbox"/>                  5 days (Standard) <input type="checkbox"/>                  Other <input type="checkbox"/></p>																			
1	SX_OB_20220318_08_10_SS_Triplicate_EUF	18.03.2022 8:10	S							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
2	SX_OB_20220318_08_15_SS_Primary_EUF	18.03.2022 8:15	S							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
3	SX_OB_20220318_12_07_SS_Primary_EUF	18.03.2022 12:07	S							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
4	SX_OB_20220318_16_03_SS_Primary_EUF	18.03.2022 16:03	S							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
5	SX_OB_20220318_16_04_SS_Duplicate_EUF	18.03.2022 16:04	S							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
6	SX_OB_20220318_16_26_SR_Rinsate_EUF	18.03.2022 16:26	W							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
7	SX_OB_20220318_16_27_SB_Blank_EUF	18.03.2022 16:27	W							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
8	SX_OB_20220318_20_01_SS_Primary_EUF	18.03.2022 20:01	S							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
9	SX_OB_20220319_00_09_SS_Primary_EUF	19.03.2022 00:09	S							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
10	SX_OB_20220319_04_03_SS_Primary_EUF	19.03.2022 04:03	S							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
11																													
12																													
13																													
Total Counts										10	8	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8

R.872697  
 21/3/22  
 TY

17.6  
 17.4°C  
 10.00hr

Method of Shipment:  Hand Delivered  
 Signature: Emma  
 Date: 19/03/22  
 Time: 08:23am  
 Temperature: 17.4°C  
 Report No: 10:00hr



## Canh To

---

**From:** Michael Cassidy  
**Sent:** Monday, 21 March 2022 8:33 AM  
**To:** #AU\_CAU001\_EnviroSampleVic  
**Subject:** FW: WGTP TST sample delivery  
**Attachments:** 20220319045141-Eurofin-12 solid\_00.xlsx; 20220319051918-Eurofin-12 water.xlsx

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**INFO:** INTERNAL EMAIL - Sent from your own Eurofins email domain.

Thanks Canh,

Kind Regards,

Michael Cassidy

Phone: 8564 5940

Mobile: 0498 700 069

Email : [MichaelCassidy@eurofins.com](mailto:MichaelCassidy@eurofins.com)

---

**From:** Emma Strong <[emma.strong@eprisk.com.au](mailto:emma.strong@eprisk.com.au)>  
**Sent:** Saturday, 19 March 2022 2:13 PM  
**To:** Michael Cassidy <[MichaelCassidy@eurofins.com](mailto:MichaelCassidy@eurofins.com)>  
**Cc:** Labreports.TST <[labreports.tst@agonenviro.com.au](mailto:labreports.tst@agonenviro.com.au)>  
**Subject:** WGTP TST sample delivery

**CAUTION:** EXTERNAL EMAIL - Sent from an email domain that is not formally trusted by Eurofins.

Do not click on links or open attachments unless you recognise the sender and are certain that the content is safe.

Hi Michael,

Please find 2 x COCs for samples collected at pivot, one for spoil and one for spoil water.

Also, these are for both a 5 day TAT, 3 days was incorrectly selected in the 'solid' COC ending in 141. This is corrected in the attached files.

There are 2 batches.

Kind regards,

**Emma Strong**

Environmental Scientist

M 0402 510 610 | E [emma.strong@eprisk.com.au](mailto:emma.strong@eprisk.com.au)

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 **872310-L**  
Project name **20220318043419-Eurofin-12**  
Project ID **JC0927**  
Received Date **Mar 18, 2022**

Client Sample ID			SX_IB_202203 17_07_54_SS TriPLICATE_EUF	SX_IB_202203 17_08_03_SS Primary_EUF	SX_OB_20220 317_11_58_SS _Primary_EUF	SX_OB_20220 317_16_02_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-Ma36478	M22-Ma36479	M22-Ma36480	M22-Ma36481
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
<b>AUS Leaching Procedure</b>						
Leachate Fluid <sup>C01</sup>		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	5.2
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTeDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	90	103	106	105
13C5-PFPeA (surr.)	1	%	109	117	123	128
13C5-PFHxA (surr.)	1	%	109	125	122	128
13C4-PFHpA (surr.)	1	%	103	120	113	122
13C8-PFOA (surr.)	1	%	98	116	69	46
13C5-PFNA (surr.)	1	%	99	112	101	114
13C6-PFDA (surr.)	1	%	84	93	76	96
13C2-PFUnDA (surr.)	1	%	73	79	51	73
13C2-PFDoDA (surr.)	1	%	73	66	45	64
13C2-PFTeDA (surr.)	1	%	95	37	22	31
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			SX_IB_202203 17_07_54_SS TriPLICATE_EUF	SX_IB_202203 17_08_03_SS Primary_EUF	SX_OB_20220 317_11_58_SS Primary_EUF	SX_OB_20220 317_16_02_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-Ma36478	M22-Ma36479	M22-Ma36480	M22-Ma36481
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonamido substances</b>						
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	88	99	81	104
D3-N-MeFOSA (surr.)	1	%	107	71	66	103
D5-N-EtFOSA (surr.)	1	%	135	78	68	110
D7-N-MeFOSE (surr.)	1	%	79	78	65	87
D9-N-EtFOSE (surr.)	1	%	85	86	66	90
D5-N-EtFOSAA (surr.)	1	%	19	23	14	25
D3-N-MeFOSAA (surr.)	1	%	21	23	17	29
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	95	108	105	108
18O2-PFHxS (surr.)	1	%	107	122	118	122
13C8-PFOS (surr.)	1	%	90	102	89	95
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	94	117	111	109
13C2-6:2 FTSA (surr.)	1	%	98	126	123	135
13C2-8:2 FTSA (surr.)	1	%	102	128	100	129
13C2-10:2 FTSA (surr.)	1	%	88	85	57	77
<b>PFASs Summations</b>						
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_OB_20220 317_16_02_SS Duplicate_EU F	SX_OB_20220 317_19_50_SS Primary_EUF	SX_OB_20220 318_00_06_SS Primary_EUF	SX_OB_20220 318_03_55_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-Ma36482	M22-Ma36483	M22-Ma36484	M22-Ma36485
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>AUS Leaching Procedure</b>						
Leachate Fluid <sup>C01</sup>		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	5.2
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	102	106	103	104
13C5-PFPeA (surr.)	1	%	119	125	120	119
13C5-PFHxA (surr.)	1	%	123	126	118	126
13C4-PFHpA (surr.)	1	%	122	126	119	125
13C8-PFOA (surr.)	1	%	40	53	36	38
13C5-PFNA (surr.)	1	%	110	121	98	113
13C6-PFDA (surr.)	1	%	94	97	75	98
13C2-PFUnDA (surr.)	1	%	73	74	51	74
13C2-PFDoDA (surr.)	1	%	75	64	40	65
13C2-PFTeDA (surr.)	1	%	48	38	18	36
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	105	104	89	102
D3-N-MeFOSA (surr.)	1	%	108	92	92	91
D5-N-EtFOSA (surr.)	1	%	119	94	101	93
D7-N-MeFOSE (surr.)	1	%	86	84	74	85
D9-N-EtFOSE (surr.)	1	%	96	89	78	89
D5-N-EtFOSAA (surr.)	1	%	18	22	17	28
D3-N-MeFOSAA (surr.)	1	%	23	23	18	29

Client Sample ID			SX_OB_20220 317_16_02_SS Duplicate_EU F	SX_OB_20220 317_19_50_SS Primary_EUF	SX_OB_20220 318_00_06_SS Primary_EUF	SX_OB_20220 318_03_55_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-Ma36482	M22-Ma36483	M22-Ma36484	M22-Ma36485
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	103	108	96	99
18O2-PFHxS (surr.)	1	%	119	126	106	114
13C8-PFOS (surr.)	1	%	108	102	81	94
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	118	118	105	119
13C2-6:2 FTSA (surr.)	1	%	134	141	117	131
13C2-8:2 FTSA (surr.)	1	%	134	132	102	139
13C2-10:2 FTSA (surr.)	1	%	91	100	52	94
<b>PFASs Summations</b>						
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_IB_202203 17_07_54_SS Triplicate_EUF	SX_IB_202203 17_08_03_SS Primary_EUF	SX_OB_20220 317_11_58_SS Primary_EUF	SX_OB_20220 317_16_02_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-Ma36486	M22-Ma36487	M22-Ma36488	M22-Ma36489
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
<b>AUS Leaching Procedure</b>						
Leachate Fluid <sup>C01</sup>		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	6.5	6.5	6.5	6.5
pH (off)	0.1	pH Units	9.2	9.3	9.4	9.9

Client Sample ID			SX_IB_202203 17_07_54_SS Triuplicate_EUF	SX_IB_202203 17_08_03_SS Primary_EUF	SX_OB_20220 317_11_58_SS _Primary_EUF	SX_OB_20220 317_16_02_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-Ma36486	M22-Ma36487	M22-Ma36488	M22-Ma36489
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	98	78	77	73
13C5-PFPeA (surr.)	1	%	117	116	124	116
13C5-PFHxA (surr.)	1	%	116	92	96	90
13C4-PFHpA (surr.)	1	%	115	92	93	97
13C8-PFOA (surr.)	1	%	104	124	99	52
13C5-PFNA (surr.)	1	%	111	97	102	106
13C6-PFDA (surr.)	1	%	96	92	95	104
13C2-PFUnDA (surr.)	1	%	84	95	97	102
13C2-PFDoDA (surr.)	1	%	78	69	77	87
13C2-PFTeDA (surr.)	1	%	89	37	36	44
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	99	87	92	99
D3-N-MeFOSA (surr.)	1	%	131	82	88	148
D5-N-EtFOSA (surr.)	1	%	143	44	46	57
D7-N-MeFOSE (surr.)	1	%	80	48	60	59
D9-N-EtFOSE (surr.)	1	%	85	49	63	64
D5-N-EtFOSAA (surr.)	1	%	25	87	85	100
D3-N-MeFOSAA (surr.)	1	%	25	121	93	99
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01



Client Sample ID			SX_IB_202203 17_07_54_SS TriPLICATE_EUF	SX_IB_202203 17_08_03_SS Primary_EUF	SX_OB_20220 317_11_58_SS _Primary_EUF	SX_OB_20220 317_16_02_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-Ma36486	M22-Ma36487	M22-Ma36488	M22-Ma36489
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	96	94	95	80
18O2-PFHxS (surr.)	1	%	109	95	93	104
13C8-PFOS (surr.)	1	%	90	100	103	103
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	117	76	83	84
13C2-6:2 FTSA (surr.)	1	%	143	102	122	143
13C2-8:2 FTSA (surr.)	1	%	132	107	136	107
13C2-10:2 FTSA (surr.)	1	%	113	77	84	85
<b>PFASs Summations</b>						
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_OB_20220 317_16_02_SS Duplicate_EU F	SX_OB_20220 317_19_50_SS _Primary_EUF	SX_OB_20220 318_00_06_SS _Primary_EUF	SX_OB_20220 318_03_55_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-Ma36490	M22-Ma36491	M22-Ma36492	M22-Ma36493
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>AUS Leaching Procedure</b>						
Leachate Fluid <sup>C01</sup>		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	6.5	6.5	6.5	6.5
pH (off)	0.1	pH Units	9.9	9.8	9.9	9.9
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			SX_OB_20220 317_16_02_SS Duplicate_EU F	SX_OB_20220 317_19_50_SS Primary_EUF	SX_OB_20220 318_00_06_SS Primary_EUF	SX_OB_20220 318_03_55_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-Ma36490	M22-Ma36491	M22-Ma36492	M22-Ma36493
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	76	79	77	74
13C5-PFPeA (surr.)	1	%	116	113	112	111
13C5-PFHxA (surr.)	1	%	92	94	90	93
13C4-PFHpA (surr.)	1	%	91	96	100	96
13C8-PFOA (surr.)	1	%	50	63	52	53
13C5-PFNA (surr.)	1	%	102	104	112	111
13C6-PFDA (surr.)	1	%	101	98	108	105
13C2-PFUnDA (surr.)	1	%	99	99	109	112
13C2-PFDoDA (surr.)	1	%	82	75	91	89
13C2-PFTeDA (surr.)	1	%	48	45	50	47
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	95	97	97	98
D3-N-MeFOSA (surr.)	1	%	110	164	107	114
D5-N-EtFOSA (surr.)	1	%	88	68	73	39
D7-N-MeFOSE (surr.)	1	%	58	50	57	53
D9-N-EtFOSE (surr.)	1	%	63	58	60	56
D5-N-EtFOSAA (surr.)	1	%	94	90	111	126
D3-N-MeFOSAA (surr.)	1	%	101	89	113	116
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	82	87	82	81
18O2-PFHxS (surr.)	1	%	102	95	93	89
13C8-PFOS (surr.)	1	%	101	103	108	100

Client Sample ID			SX_OB_20220 317_16_02_SS _Duplicate_EU F	SX_OB_20220 317_19_50_SS _Primary_EUF	SX_OB_20220 318_00_06_SS _Primary_EUF	SX_OB_20220 318_03_55_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-Ma36490	M22-Ma36491	M22-Ma36492	M22-Ma36493
Date Sampled			Mar 17, 2022	Mar 17, 2022	Mar 18, 2022	Mar 18, 2022
Test/Reference	LOR	Unit				
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	84	83	83	87
13C2-6:2 FTSA (surr.)	1	%	140	120	132	161
13C2-8:2 FTSA (surr.)	1	%	147	130	149	106
13C2-10:2 FTSA (surr.)	1	%	78	73	94	96
<b>PFASs Summations</b>						
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 19, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Mar 19, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Mar 19, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 19, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 19, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 19, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 19, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 18, 2022	

**Company Name:** Agon Environmental Pty Ltd - VIC  
**Address:** 3/224 Glen Osmond Road  
Fullarton  
SA 5063  
**Project Name:** 20220318043419-Eurofin-12  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 872310  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Mar 18, 2022 12:35 PM  
**Due:** Mar 25, 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 (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_IB_20220317_07_54_SS_Triplicate_EU F	Mar 17, 2022	7:54AM	Soil	M22-Ma36468		X	X	X
2	SX_IB_20220317_08_03_SS_Primary_EUF	Mar 17, 2022	8:03AM	Soil	M22-Ma36469		X	X	X
3	SX_OB_20220317_11_58_S_S_Primary_EU F	Mar 17, 2022	11:58AM	Soil	M22-Ma36470		X	X	X
4	SX_OB_20220	Mar 17, 2022	4:02PM	Soil	M22-Ma36471		X	X	X

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFAS)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	317_16_02_S S_Primary_EU F								
5	SX_OB_20220 317_16_02_S S_Duplicate_E UF	Mar 17, 2022	4:02PM	Soil	M22-Ma36472		X	X	X
6	SX_OB_20220 317_16_17_S R_Rinsate_EU F	Mar 17, 2022	4:17PM	Water	M22-Ma36473			X	
7	SX_OB_20220 317_16_19_S B_Blank_EUF	Mar 17, 2022	4:19PM	Water	M22-Ma36474			X	

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<b>Project Name:</b>	20220318043419-Eurofin-12	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
8	SX_OB_20220317_19_50_S_S_Primary_EU_F	Mar 17, 2022	7:50PM	Soil	M22-Ma36475		X	X	X
9	SX_OB_20220318_00_06_S_S_Primary_EU_F	Mar 18, 2022	12:06AM	Soil	M22-Ma36476		X	X	X
10	SX_OB_20220318_03_55_S_S_Primary_EU_F	Mar 18, 2022	3:55AM	Soil	M22-Ma36477		X	X	X
11	SX_IB_20220317_07_54_SS	Mar 17, 2022	7:54AM	AUS Leachate - pH 5.0	M22-Ma36478	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Mar 18, 2022 12:35 PM
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<b>Project Name:</b>	20220318043419-Eurofin-12	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
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**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFAS)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	_Triplicate_EU F								
12	SX_IB_20220317_08_03_SS_Primary_EUF	Mar 17, 2022	8:03AM	AUS Leachate - pH 5.0	M22-Ma36479	X		X	
13	SX_OB_20220317_11_58_SS_Primary_EUF	Mar 17, 2022	11:58AM	AUS Leachate - pH 5.0	M22-Ma36480	X		X	
14	SX_OB_20220317_16_02_SS_Primary_EUF	Mar 17, 2022	4:02PM	AUS Leachate - pH 5.0	M22-Ma36481	X		X	
15	SX_OB_20220	Mar 17, 2022	4:02PM	AUS Leachate	M22-Ma36482	X		X	



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<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
15	SX_OB_20220 317_16_02_S S_Duplicate_E UF	Mar 17, 2022	4:02PM	AUS Leachate - pH 5.0	M22-Ma36482				
16	SX_OB_20220 317_19_50_S S_Primary_EU F	Mar 17, 2022	7:50PM	AUS Leachate - pH 5.0	M22-Ma36483	X		X	
17	SX_OB_20220 318_00_06_S S_Primary_EU F	Mar 18, 2022	12:06AM	AUS Leachate - pH 5.0	M22-Ma36484	X		X	
18	SX_OB_20220 318_03_55_S	Mar 18, 2022	3:55AM	AUS Leachate - pH 5.0	M22-Ma36485	X		X	

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<b>Project Name:</b>	20220318043419-Eurofin-12	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	S_Primary_EU F								
19	SX_IB_202203 17_07_54_SS _Triplicate_EU F	Mar 17, 2022	7:54AM	AUS Leachate - Reagent Water	M22-Ma36486	X		X	
20	SX_IB_202203 17_08_03_SS _Primary_EUF	Mar 17, 2022	8:03AM	AUS Leachate - Reagent Water	M22-Ma36487	X		X	
21	SX_OB_20220 317_11_58_S S_Primary_EU F	Mar 17, 2022	11:58AM	AUS Leachate - Reagent Water	M22-Ma36488	X		X	
22	SX_OB_20220	Mar 17, 2022	4:02PM	AUS Leachate	M22-Ma36489	X		X	

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<b>Project Name:</b>	20220318043419-Eurofin-12	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
22	SX_OB_20220317_16_02_S_S_Primary_EU_F	Mar 17, 2022	4:02PM	AUS Leachate - Reagent Water	M22-Ma36489				
23	SX_OB_20220317_16_02_S_S_Duplicate_EU_F	Mar 17, 2022	4:02PM	AUS Leachate - Reagent Water	M22-Ma36490	X		X	
24	SX_OB_20220317_19_50_S_S_Primary_EU_F	Mar 17, 2022	7:50PM	AUS Leachate - Reagent Water	M22-Ma36491	X		X	
25	SX_OB_20220318_00_06_S	Mar 18, 2022	12:06AM	AUS Leachate - Reagent	M22-Ma36492	X		X	

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**Project Name:** 20220318043419-Eurofin-12  
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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
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	S_Primary_EU F			Water					
26	SX_OB_20220 318_03_55_S S_Primary_EU F	Mar 18, 2022	3:55AM	AUS Leachate - Reagent Water	M22-Ma36493	X		X	
<b>Test Counts</b>						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

<b>mg/kg:</b> milligrams per kilogram	<b>mg/L:</b> milligrams per litre	<b>µg/L:</b> micrograms per litre
<b>ppm:</b> parts per million	<b>ppb:</b> parts per billion	<b>%:</b> Percentage
<b>org/100 mL:</b> Organisms per 100 millilitres	<b>NTU:</b> Nephelometric Turbidity Units	<b>MPN/100 mL:</b> Most Probable Number of organisms per 100 millilitres

### Terms

<b>APHA</b>	American Public Health Association
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	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.
<b>NCP</b>	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.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>TBTO</b>	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.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 5.4
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	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
<b>Method Blank</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
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	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonamido substances</b>						
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	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
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	
<b>Method Blank</b>						
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
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	
<b>LCS - % Recovery</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA)	%	91		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	81		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	91		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	95		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	98		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	91		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	87		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	100		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	97		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	97		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	94		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>								
Perfluorooctane sulfonamide (FOSA)	%	101			50-150	Pass		
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	96			50-150	Pass		
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	74			50-150	Pass		
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	84			50-150	Pass		
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	86			50-150	Pass		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	89			50-150	Pass		
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	86			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	90			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	91			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	111			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	97			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	94			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	109			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	82			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	85			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	101			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	103			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	94			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	101			50-150	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>								
				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Ma36479	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
<b>Duplicate</b>								
<b>Perfluoroalkyl sulfonamido substances</b>								
				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ma36479	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma36479	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma36479	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma36479	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma36479	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass

<b>Duplicate</b>								
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1	Result 2	RPD		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma36479	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma36479	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
<b>Duplicate</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
<b>Duplicate</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)</b>				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma36479	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma36479	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
<b>Duplicate</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Ma36487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass



Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ma36487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma36487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma36487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma36487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma36487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma36487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma36487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma36487	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-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma36487	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma36487	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma36487	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	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

### Qualifier Codes/Comments

Code	Description
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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# CHAIN OF CUSTODY RECORD

Eurofins | Environment Testing ABN 50 005 085 521

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Melbourne Laboratory  
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03 8564 5000 EnviroSampleVic@eurofins.com

<b>Company</b> AGON Environmental - Tunnel Spoil Testing		<b>Project No</b> JC0927		<b>Project Manager</b> Craig Trimbur		<b>Sampler(s)</b> Hannah - EP Risk Toby - Agon Enviro		
<b>Address</b> Unit H76, 63-85 Turner St, Port Melbourne VIC 3207		<b>Project Name</b> 20220318043419-Eurofin-12		<b>EDD Format</b> ESdat, EQuIS etc		<b>Handed over by</b>		
<b>Contact Name</b> Craig Trimbur David Lawson		Analyses Where metals are requested, please specify "Total" or "Filtered" SUITE code must be used to attend SUITE pricing Spoil Sample Preparation Suite: WGTP-R1-TRH/PAH/Phenols/OCFI/PCBI/VOC/ Vinyl Chloride/ Metals (As, Cd, Cr, Cu, Ni, Pb, Hg, Ag, Sn, Mo, Se, Zn)/ Cr6+ CN/ Total Fluoride/ pH PFAS Extended Suite - 0.1-ug/kg ASLP PH 5 - PFAS 0.01-0.05 ug/l ASLP Reagent - PFAS 0.01-0.05ug/l	<b>Special Directions</b> 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.		<b>Email for Invoice</b> finance@agonenviro.com.au LabReports.TST@agonenviro.com.au		<b>Email for Results</b> LabReports.TST@agonenviro.com.au agonenvironmental@esdat.com.au motherhublabresults1@wgtp.com.au	
<b>Phone No</b> +61 400 826 907 (Craig) +61 490 411 004 (David)			<b>Containers</b> Change container type & size if necessary		<b>Required Turnaround Time (TAT)</b> Default will be 5 days if not ticked		<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 ( )	
<b>Purchase Order</b>			<b>500mL Plastic</b>		<b>250mL Plastic</b>		<b>125mL Plastic</b>	
<b>Quote ID No</b> Agon WGTP TST			<b>200mL Amber Glass</b>		<b>40mL VOA vial</b>		<b>500mL PFAS Bottle</b>	
			<b>Jar (Glass or HDPE)</b>		<b>Other (Asbestos AS5664, WA Guidelines)</b>		<b>Sample Comments</b> / Dangerous Goods Hazard Warning	
<b>No</b>	<b>Client Sample ID</b>	<b>Sampled Date/Time</b> dd/mm/yy hh:mm	<b>Matrix</b> Solid (S) Water (W)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
1	SX_IB_20220317_07_54_SS_Triplicate_EUF	03.17.2022 7:54	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2	SX_IB_20220317_08_03_SS_Primary_EUF	03.17.2022 8:03	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3	SX_OB_20220317_11_58_SS_Primary_EUF	03.17.2022 11:58	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
4	SX_OB_20220317_16_02_SS_Primary_EUF	03.17.2022 16:02	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
5	SX_OB_20220317_16_02_SS_Duplicate_EUF	03.17.2022 16:02	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
6	SX_OB_20220317_16_17_SR_Rinsate_EUF	03.17.2022 16:17	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7	SX_OB_20220317_16_19_SB_Blank_EUF	03.17.2022 16:19	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	SX_OB_20220317_19_50_SS_Primary_EUF	17.03.2022 19:50	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
9	SX_OB_20220318_00_06_SS_Primary_EUF	18.03.2022 00:06	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
10	SX_OB_20220318_03_55_SS_Primary_EUF	18.03.2022 03:55	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
11				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Total Counts</b>				8	8	10	8	
<b>Method of Shipment</b> <input checked="" type="checkbox"/> Courier (# ) <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Postal		<b>Name</b>		<b>Signature</b>		<b>Date</b>		
<b>Laboratory Use Only</b>		<b>Received By</b> MICHAEL		<b>Signature</b>		<b>Date</b> 18/3		
		<b>Received By</b>		<b>Signature</b>		<b>Date</b> 12.35pm		
		<b>SYD   BNE   MEL   PER   ADL   NTL   DRW</b>		<b>Signature</b>		<b>Temperature</b> 22.6		
		<b>SYD   BNE   MEL   PER   ADL   NTL   DRW</b>		<b>Signature</b>		<b>Report No</b> 872310		

NO ICE  
22.8  
-0.2  
22.6  
Joker