

# TBM Spoil Waste Categorisation Report

<b>TBM Spoil Waste Cat Report No:</b>	A04.0320220614143700_02	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	5
Approx. Source Tunnel Chainage From	819	Approx. Source Tunnel Chainage To	831
Approx. Rings From	320	Approx. Rings To	349
Foaming Agent	TamSoil 287AC	Water Source	Potable (City West Water)
For BSF Holding Bay No:	A04.03	Start of Filling From (Time / date)	31/05/2022
Tonnes Put in Holding Bay No:	7670.03	Finish of Filling (Time / Date)	01/06/2022
Classified Volume (LCM)	4000	Spoil Classification Decision	NPIW Containment
Sampling Ratio (samples per LCM)	1 : 285.71	Approx. Bank Cubic Meters (BCM)	2293.61

## 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 trucks 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_20220531_16_08_SS_Duplicate_EUF	SX_OB_20220531_12_04_SS_Primary_EUF	SX_OB_20220531_04_08_SS_Primary_ALS
SX_OB_20220531_16_09_SS_Triplicate_ALS	SX_OB_20220531_08_21_SS_Primary_EUF	SX_OB_20220531_04_01_SS_Primary_EUF
SX_OB_20220531_16_07_SS_Primary_EUF	SX_OB_20220531_08_16_SS_Triplicate_EUF	SX_OB_20220531_00_11_SS_Primary_EUF
SX_OB_20220531_16_01_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS	SX_OB_20220531_00_01_SS_Primary_ALS
SX_OB_20220531_12_17_SS_Primary_ALS	SX_OB_20220531_08_13_SS_Primary_ALS	
Total Sample Numbers	14	Ratio Acceptable
Primary Sample Numbers	10	Yes
Classified Volume (LCM)	4000 m <sup>3</sup>	
Volume: Sample Number Ratio (Samples per LCM)	1 : 285.71	

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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>No</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>Yes</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>No</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>N/A</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, see section 4</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>No</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>No</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>Yes</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	14*	10	1 : 285.71	14	34	56.93	65.99	95	20	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Nickel	mg/kg	5	14*	10	1 : 285.71	14	46	103.3	127.4	184	60	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)

“\*” - Ratio used for categorisation of spoil is total samples to LCM due to spoil not 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

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

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

PFAS Test Results											
Chemical	Unit	LOR	No. of 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	14*	10	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFOA	ug/kg	5	14*	10	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFHxS	ug/kg	5	14*	10	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
ASLP (pH= 5) PFAS Concentrations											
PFOA	ug/L	0.01	14*	10	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS+PFHxS	ug/L	0.01	14*	10	0	N/A	N/A	N/A	<0.01	7	NPIW-Containment
ASLP (pH= 7) PFAS Concentrations											
PFOA	ug/L	0.01	14*	10	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS+PFHxS	ug/L	0.01	14*	10	0	N/A	N/A	N/A	<0.01	7	NPIW-Containment

“\*” - Ratio used for categorisation of spoil is total samples to LCM due to spoil not being from a zone of exception. (See Section 4)



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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:</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 (Tvo) 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 tertiary volcanics (Tvo2) soil) 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 style="text-align: center;">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.</p> <p style="text-align: center;">Golder therefore concluded that the nickel is likely associated with geochemical enrichment rather than added contamination.</p> <p style="text-align: center;">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.	Default testing regime was implemented for all samples collected for the spoil in this holding bay prior to implementation of the reduced sampling scope, as specified within the SAQP.
3.	Test result outcomes can lead to two classification possibilities; however, the classification decision follows the preference of the waste management hierarchy.
4.	Spoil is not from a “Zone of Exception”. Zone of exception applies a sampling ratio of only Primary Samples to LCM to categorise spoil as per the SAQP revision 5. Sample to categorised volume ratio in zones of exception is to be as per IWRG702 with 1 primary spoil sample categorising a maximum 250 m3 of spoil.
5.	Loose Cubic metres (LCM) to mass (tonnes) conversion ratio used is 1 LCM:1.6 tonnes
6.	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.
7.	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.
8.	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.
9.	This report should be read in full.

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## 5. Attachments

ATTACHMENT A: TABULATED RESULTS

ATTACHMENT B: 95% UCL AVE CALCULATIONS

ATTACHMENT C: LABORATORY CERTIFICATES

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TBM Spoil Waste Cat Report No:	A04.0320220614143700_02	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 A: TABULATED RESULTS



							Metals						
							Arsenic	Cadmium	Copper	Chromium (III+VI)	Chromium (hexavalent)	Lead	Mercury
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							2	1	5	5	1	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 Category B Leached Upper Limits													
EPA Victoria IWRG621 Category B Upper Limits							2,000	400	20,000		2,000	6,000	300
EPA Victoria IWRG621 Category C Leached Upper Limits													
EPA Victoria IWRG621 Category C Upper Limits							500	100	5,000		500	1,500	75
EPA Victoria IWRG621 Fill Upper Limits							20	3	100		1	300	1

Location Code	Field ID	Sample Code	Date	Lab Report Number	Lab Name	Sample Type	Parent Sample	Arsenic	Cadmium	Copper	Chromium (III+VI)	Chromium (hexavalent)	Lead	Mercury
A04.03	SX_OB_20220531_00_01_SS_Primary_ALS	EM2210112008	31/05/2022	EM2210112	ALSE-Melbourne	Normal		37	<1	57	105	<1.0	<5	<0.1
A04.03	SX_OB_20220531_00_01_SS_Primary_ALS	EM2210112017	31/05/2022	EM2210112	ALSE-Melbourne	Normal								
A04.03	SX_OB_20220531_00_11_SS_Primary_EUF	M22-My0073875	31/05/2022	893162	Eurofins Environment ANZ	Normal		35	<1	40	130	<1	7.8	<0.1
A04.03	SX_OB_20220531_00_11_SS_Primary_EUF	M22-My0073884	31/05/2022	893162	Eurofins Environment ANZ	Normal								
A04.03	SX_OB_20220531_00_11_SS_Primary_EUF	M22-My0073893	31/05/2022	893162	Eurofins Environment ANZ	Normal								
A04.03	SX_OB_20220531_04_01_SS_Primary_EUF	M22-My0073876	31/05/2022	893162	Eurofins Environment ANZ	Normal		34	<1	62	120	<1	<5	<0.1
A04.03	SX_OB_20220531_04_01_SS_Primary_EUF	M22-My0073885	31/05/2022	893162	Eurofins Environment ANZ	Normal								
A04.03	SX_OB_20220531_04_01_SS_Primary_EUF	M22-My0073894	31/05/2022	893162	Eurofins Environment ANZ	Normal								
A04.03	SX_OB_20220531_04_08_SS_Primary_ALS	EM2210112009	31/05/2022	EM2210112	ALSE-Melbourne	Normal		71	<1	37	74	<1.0	6	<0.1
A04.03	SX_OB_20220531_04_08_SS_Primary_ALS	EM2210112018	31/05/2022	EM2210112	ALSE-Melbourne	Normal								
A04.03	SX_OB_20220531_08_13_SS_Primary_ALS	EM2210307001	31/05/2022	EM2210307	ALSE-Melbourne	Normal		59	<1	25	76	<1.0	7	<0.1
A04.03	SX_OB_20220531_08_13_SS_Primary_ALS	EM2210307011	31/05/2022	EM2210307	ALSE-Melbourne	Normal								
A04.03	SX_OB_20220531_08_15_SS_Duplicate_ALS	EM2210307002	31/05/2022	EM2210307	ALSE-Melbourne	Field_D	EM2210307001	64	<1	37	82	<1.0	6	<0.1
A04.03	SX_OB_20220531_08_15_SS_Duplicate_ALS	EM2210307012	31/05/2022	EM2210307	ALSE-Melbourne	Field_D	EM2210307011							
A04.03	SX_OB_20220531_08_16_SS_Triplicate_EUF	M22-Jn0000705	31/05/2022	893567	Eurofins Environment ANZ	Interlab_D	EM2210307001	95	<1	34	140	<1	11	<0.1
A04.03	SX_OB_20220531_08_16_SS_Triplicate_EUF	M22-Jn0000715	31/05/2022	893567	Eurofins Environment ANZ	Interlab_D	EM2210307001							
A04.03	SX_OB_20220531_08_16_SS_Triplicate_EUF	M22-Jn0000723	31/05/2022	893567	Eurofins Environment ANZ	Interlab_D	EM2210307011							
A04.03	SX_OB_20220531_08_21_SS_Primary_EUF	M22-Jn0000706	31/05/2022	893567	Eurofins Environment ANZ	Normal		66	<1	36	130	<1	9.2	<0.1
A04.03	SX_OB_20220531_08_21_SS_Primary_EUF	M22-Jn0000716	31/05/2022	893567	Eurofins Environment ANZ	Normal								
A04.03	SX_OB_20220531_08_21_SS_Primary_EUF	M22-Jn0000724	31/05/2022	893567	Eurofins Environment ANZ	Normal								
A04.03	SX_OB_20220531_12_04_SS_Primary_EUF	M22-Jn0000707	31/05/2022	893567	Eurofins Environment ANZ	Normal		83	<1	37	130	<1	17	<0.1
A04.03	SX_OB_20220531_12_04_SS_Primary_EUF	M22-Jn0000717	31/05/2022	893567	Eurofins Environment ANZ	Normal								
A04.03	SX_OB_20220531_12_04_SS_Primary_EUF	M22-Jn0000725	31/05/2022	893567	Eurofins Environment ANZ	Normal								
A04.03	SX_OB_20220531_12_17_SS_Primary_ALS	EM2210307003	31/05/2022	EM2210307	ALSE-Melbourne	Normal		49	<1	40	80	<1.0	6	<0.1
A04.03	SX_OB_20220531_12_17_SS_Primary_ALS	EM2210307013	31/05/2022	EM2210307	ALSE-Melbourne	Normal								
A04.03	SX_OB_20220531_16_01_SS_Primary_ALS	EM2210307004	31/05/2022	EM2210307	ALSE-Melbourne	Normal		73	<1	61	88	<1.0	<5	<0.1
A04.03	SX_OB_20220531_16_01_SS_Primary_ALS	EM2210307014	31/05/2022	EM2210307	ALSE-Melbourne	Normal								
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF	M22-Jn0000708	31/05/2022	893567	Eurofins Environment ANZ	Normal		47	<1	56	120	<1	6.3	<0.1
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF	M22-Jn0000718	31/05/2022	893567	Eurofins Environment ANZ	Normal								
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF	M22-Jn0000726	31/05/2022	893567	Eurofins Environment ANZ	Normal								
A04.03	SX_OB_20220531_16_08_SS_Duplicate_EUF	M22-Jn0000709	31/05/2022	893567	Eurofins Environment ANZ	Field_D	M22-Jn0000708	46	<1	55	120	<1	6.8	<0.1
A04.03	SX_OB_20220531_16_08_SS_Duplicate_EUF	M22-Jn0000719	31/05/2022	893567	Eurofins Environment ANZ	Field_D	M22-Jn0000718							
A04.03	SX_OB_20220531_16_08_SS_Duplicate_EUF	M22-Jn0000727	31/05/2022	893567	Eurofins Environment ANZ	Field_D	M22-Jn0000726							
A04.03	SX_OB_20220531_16_09_SS_Triplicate_ALS	EM2210307005	31/05/2022	EM2210307	ALSE-Melbourne	Interlab_D	M22-Jn0000708	38	<1	42	65	<1.0	<5	<0.1
A04.03	SX_OB_20220531_16_09_SS_Triplicate_ALS	EM2210307015	31/05/2022	EM2210307	ALSE-Melbourne	Interlab_D	M22-Jn0000726							





























Metals								
Arsenic	Cadmium	Copper	Chromium (III+VI)	Chromium (hexavalent)	Lead	Mercury	Molybdenum	Nickel
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

\*\*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





				PAH															
Selenium	Silver	Tin	Zinc	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ (LOR)	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
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier r:

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. An



						BTEX						TRH							
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
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier r:

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. An

		TPH				Organochlorine Pesticides																
		C10-C14	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)	
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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		20	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	0.05	0.1	0.03	0.03	
Location Code	Field ID																					
C03.03	SX_OB_20220530_16_03_SS_Primary_EUF	<20	<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	<0.05	<0.1			
C03.03	SX_OB_20220530_16_04_SS_Duplicate_EUF	<20	<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	<0.05	<0.1			
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
C03.03	SX_OB_20220530_16_03_SS_Primary_EUF	<20	<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	<0.05	<0.1			
C03.03	SX_OB_20220530_16_05_SS_Triplicate_ALS	<50	<100	<100	<50	<0.05	<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		
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF	<20	<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	<0.05	<0.1			
A04.03	SX_OB_20220531_16_08_SS_Duplicate_EUF	<20	<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	<0.05	<0.1			
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF	<20	<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	<0.05	<0.1			
A04.03	SX_OB_20220531_16_09_SS_Triplicate_ALS	<50	<100	<100	<50	<0.05	<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		
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

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

TPH				Organochlorine Pesticides																
C10-C14	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)	
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier r:

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. An



Hexachlorobenzene	Heptachlor	Heptachlor epoxide	α-BHC	β-BHC	γ-BHC	γ-BHC (Lindane)	Methoxychlor	Toxaphene	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	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	
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier r:

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. An





Phenols																			
Tetrachlorophenols	2,3,5,6-Tetrachlorophenol	Cresol Total	4,6-Dinitro-o-cyclohexyl phenol	Phenols (halogenated) EPAVIC	Phenols (non-halogenated) EPAVIC	2,4-Dimethylphenol	2-Methylphenol	2-Nitrophenol	2,4-Dinitrophenol	3&4-Methylphenol (m&p-cresol)	4-Nitrophenol	Dinoseb	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)		
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/L	mg/kg

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier r:

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. An

EQL	6:2 Fluorotelomer sulfonic acid (6:2 FTS)		4:2 Fluorotelomer sulfonic acid (4:2 FTS)		N-Ethyl perfluorooctane sulfonamide (NEFOSA)		N-ethyl-perfluorooctanesulfonamide acetic acid (NEFOSAA)		N-ethylperfluorooctanesulfonamide (NEFOSE)		N-Methyl perfluorooctane sulfonamide (NMeFOSA)		N-methylperfluorooctane sulfonamide acetic acid (NMeFOSAA)		N-methylperfluorooctanesulfonamide (NMeFOSE)		Perfluorobutanoic acid (PFBA)		Perfluorobutane sulfonic acid (PFBS)			
	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
EQL	0.00005	0.01	0.00001	0.005	0.00005	0.005	0.00005	0.01	0.00005	0.005	0.00005	0.005	0.00005	0.01	0.00005	0.005	0.00005	0.005	0.00005	0.005	0.00001	0.005
Location Code	Field ID																					
C03.03	SX_OB_20220530_16_03_SS_Primary_EUF																					
C03.03	SX_OB_20220530_16_04_SS_Duplicate_EUF																					
RPD																						
C03.03	SX_OB_20220530_16_03_SS_Primary_EUF																					
C03.03	SX_OB_20220530_16_05_SS_Triplicate_ALS																					
RPD																						
C03.03	SX_OB_20220530_16_03_SS_Primary_EUF																					
C03.03	SX_OB_20220530_16_04_SS_Duplicate_EUF																					
RPD																						
C03.03	SX_OB_20220530_16_03_SS_Primary_EUF																					
C03.03	SX_OB_20220530_16_04_SS_Duplicate_EUF																					
RPD																						
C03.03	SX_OB_20220530_16_03_SS_Primary_EUF																					
C03.03	SX_OB_20220530_16_05_SS_Triplicate_ALS																					
RPD																						
C03.03	SX_OB_20220530_07_48_SS_Primary_ALS																					
C03.03	SX_OB_20220530_07_49_SS_Duplicate_ALS																					
RPD																						
C03.03	SX_OB_20220530_07_48_SS_Primary_ALS																					
C03.03	SX_OB_20220530_07_49_SS_Duplicate_EUF																					
RPD																						
C03.03	SX_OB_20220530_07_48_SS_Primary_ALS																					
C03.03	SX_OB_20220530_07_49_SS_Duplicate_ALS																					
RPD																						
C03.03	SX_OB_20220530_07_48_SS_Primary_ALS																					
C03.03	SX_OB_20220530_07_49_SS_Triplicate_EUF																					
RPD																						
C03.03	SX_OB_20220530_07_48_SS_Primary_ALS																					
C03.03	SX_OB_20220530_07_49_SS_Triplicate_EUF																					
RPD																						
C03.03	SX_OB_20220530_07_48_SS_Primary_ALS																					
C03.03	SX_OB_20220530_07_49_SS_Triplicate_EUF																					
RPD																						
C03.03	SX_OB_20220530_07_48_SS_Primary_ALS																					
C03.03	SX_OB_20220530_07_49_SS_Triplicate_EUF																					
RPD																						
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF																					
A04.03	SX_OB_20220531_16_08_SS_Duplicate_EUF																					
RPD																						
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF																					
A04.03	SX_OB_20220531_16_09_SS_Triplicate_ALS																					
RPD																						
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF																					
A04.03	SX_OB_20220531_16_08_SS_Duplicate_EUF																					
RPD																						
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF																					
A04.03	SX_OB_20220531_16_08_SS_Duplicate_EUF																					
RPD																						
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF																					
A04.03	SX_OB_20220531_16_09_SS_Triplicate_ALS																					
RPD																						
A04.03	SX_OB_20220531_08_13_SS_Primary_ALS																					
A04.03	SX_OB_20220531_08_15_SS_Duplicate_ALS																					
RPD																						
A04.03	SX_OB_20220531_08_13_SS_Primary_ALS																					
A04.03	SX_OB_20220531_08_16_SS_Triplicate_EUF																					
RPD																						
A04.03	SX_OB_20220531_08_13_SS_Primary_ALS																					
A04.03	SX_OB_20220531_08_16_SS_Triplicate_EUF																					
RPD																						
A04.03	SX_OB_20220531_08_13_SS_Primary_ALS																					
A04.03	SX_OB_20220531_08_15_SS_Duplicate_ALS																					
RPD																						
A04.03	SX_OB_20220531_08_13_SS_Primary_ALS																					
A04.03	SX_OB_20220531_08_16_SS_Triplicate_EUF																					
RPD																						

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

6:2 Fluorotelomer sulfonic acid (6:2 FTS)		4:2 Fluorotelomer sulfonic acid (4:2 FTS)		N-Ethyl perfluorooctane sulfonamide (NEFOSA)		N-ethyl-perfluorooctanesulfonamid acetic acid (NEFOSAA)		N-ethylperfluorooctanesulfonamidoethanol (NEFOSE)		N-Methyl perfluorooctane sulfonamide (NMeFOSA)		N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)		N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)		Perfluorobutanoic acid (PFBA)		Perfluorobutane sulfonic acid (PFBS)	
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

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier r

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. An



PFOS/PFOA																			
Perfluorodecanoic acid (PFDA)		Perfluorododecanoic acid (PFDoDA)		Perfluorodecanesulfonic acid (PFDS)		Perfluoroheptanoic acid (PFHpA)		Perfluoroheptane sulfonic acid (PFHpS)		Perfluorohexanoic acid (PFHxA)		Perfluorononanoic acid (PFNA)		Perfluorononanesulfonic acid (PFNS)(trace)		Perfluorooctanoic acid (PFOA)		Perfluorooctane sulfonamide (PFOSA)	
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

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier r

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. An

EQL	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
EQL	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005
Location Code	Field ID																			
C03.03	SX_OB_20220530_16_03_SS_Primary_EUF																			
C03.03	SX_OB_20220530_16_04_SS_Duplicate_EUF																			
RPD																				
C03.03	SX_OB_20220530_16_03_SS_Primary_EUF																			
C03.03	SX_OB_20220530_16_05_SS_Triplicate_ALS																			
RPD																				
C03.03	SX_OB_20220530_16_03_SS_Primary_EUF																			
C03.03	SX_OB_20220530_16_04_SS_Duplicate_EUF																			
RPD																				
C03.03	SX_OB_20220530_16_03_SS_Primary_EUF																			
C03.03	SX_OB_20220530_16_04_SS_Duplicate_EUF																			
RPD																				
C03.03	SX_OB_20220530_16_03_SS_Primary_EUF																			
C03.03	SX_OB_20220530_16_05_SS_Triplicate_ALS																			
RPD																				
C03.03	SX_OB_20220530_07_48_SS_Primary_ALS																			
C03.03	SX_OB_20220530_07_49_SS_Duplicate_ALS																			
RPD																				
C03.03	SX_OB_20220530_07_48_SS_Primary_ALS																			
C03.03	SX_OB_20220530_07_49_SS_Triplicate_EUF																			
RPD																				
C03.03	SX_OB_20220530_07_48_SS_Primary_ALS																			
C03.03	SX_OB_20220530_07_49_SS_Duplicate_EUF																			
RPD																				
C03.03	SX_OB_20220530_07_48_SS_Primary_ALS																			
C03.03	SX_OB_20220530_07_49_SS_Triplicate_EUF																			
RPD																				
C03.03	SX_OB_20220530_07_48_SS_Primary_ALS																			
C03.03	SX_OB_20220530_07_49_SS_Duplicate_EUF																			
RPD																				
C03.03	SX_OB_20220530_07_48_SS_Primary_ALS																			
C03.03	SX_OB_20220530_07_49_SS_Triplicate_EUF																			
RPD																				
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF																			
A04.03	SX_OB_20220531_16_08_SS_Duplicate_EUF																			
RPD																				
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF																			
A04.03	SX_OB_20220531_16_09_SS_Triplicate_ALS																			
RPD																				
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF																			
A04.03	SX_OB_20220531_16_08_SS_Duplicate_EUF																			
RPD																				
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF																			
A04.03	SX_OB_20220531_16_09_SS_Triplicate_ALS																			
RPD																				
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF																			
A04.03	SX_OB_20220531_16_08_SS_Duplicate_EUF																			
RPD																				
A04.03	SX_OB_20220531_16_07_SS_Primary_EUF																			
A04.03	SX_OB_20220531_16_09_SS_Triplicate_ALS																			
RPD																				
A04.03	SX_OB_20220531_08_13_SS_Primary_ALS																			
A04.03	SX_OB_20220531_08_15_SS_Duplicate_ALS																			
RPD																				
A04.03	SX_OB_20220531_08_13_SS_Primary_ALS																			
A04.03	SX_OB_20220531_08_16_SS_Triplicate_EUF																			
RPD																				
A04.03	SX_OB_20220531_08_13_SS_Primary_ALS																			
A04.03	SX_OB_20220531_08_15_SS_Duplicate_ALS																			
RPD																				
A04.03	SX_OB_20220531_08_13_SS_Primary_ALS																			
A04.03	SX_OB_20220531_08_16_SS_Triplicate_EUF																			
RPD																				

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

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 + PFOA)*		
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	

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier r

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. An





				Chlorinated Hydrocarbons																
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*		Sum of PFAS		1,1-dichloroethane	1,1-dichloroethene	1,1,1,2-tetrachloroethane	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	
mg/L	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier r

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. An



														NA					
Hexachlorobutadiene	Other chlorinated hydrocarbons EPAVic	Trichloroethene	Chlorinated hydrocarbons EPAVic	cis-1,2-dichloroethene	1,1,2-trichloroethane	trans-1,3-dichloropropene	Vinyl chloride	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	trans-1,2-dichloroethene	Tetrachloroethene	Sum of WA DWER PFAS (n=10)*	Moisture Content	Arochlor 1232	Arochlor 1242	Arochlor 1248	
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	UG/KG	µg/L	%	mg/kg	mg/kg	mg/kg

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier r

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. An



PCBs					Inorganics								Halogenated Benzenes							
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	
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	-	-	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier r:

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. An



Halogenated Hydrocarbons					MAH						Solvents					SPOCAS
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	-

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier r:

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. An

# TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	A04.0320220614143700_02	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 Data Sets with Non-Detects</b>										
2											
3	User Selected Options										
4	Date/Time of Computation		ProUCL 5.115/06/2022 10:20:39 AM								
5	From File		WorkSheet_a.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			14		Number of Distinct Observations			14		
15							Number of Missing Observations			0	
16	Minimum			34		Mean			56.93		
17	Maximum			95		Median			54		
18	SD			19.15		Std. Error of Mean			5.117		
19	Coefficient of Variation			0.336		Skewness			0.523		
20											
21	<b>Normal GOF Test</b>										
22	Shapiro Wilk Test Statistic			0.934		<b>Shapiro Wilk GOF Test</b>					
23	5% Shapiro Wilk Critical Value			0.874		Data appear Normal at 5% Significance Level					
24	Lilliefors Test Statistic			0.161		<b>Lilliefors GOF Test</b>					
25	5% Lilliefors Critical Value			0.226		Data appear Normal at 5% Significance Level					
26	<b>Data appear 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			65.99		95% Adjusted-CLT UCL (Chen-1995)			66.11		
31						95% Modified-t UCL (Johnson-1978)			66.11		
32											
33	<b>Gamma GOF Test</b>										
34	A-D Test Statistic			0.332		<b>Anderson-Darling Gamma GOF Test</b>					
35	5% A-D Critical Value			0.735		Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic			0.143		<b>Kolmogorov-Smirnov Gamma GOF Test</b>					
37	5% K-S Critical Value			0.229		Detected data appear Gamma Distributed at 5% Significance Level					
38	<b>Detected data appear Gamma Distributed at 5% Significance Level</b>										
39											
40	<b>Gamma Statistics</b>										
41	k hat (MLE)			9.721		k star (bias corrected MLE)			7.686		
42	Theta hat (MLE)			5.856		Theta star (bias corrected MLE)			7.407		
43	nu hat (MLE)			272.2		nu star (bias corrected)			215.2		
44	MLE Mean (bias corrected)			56.93		MLE Sd (bias corrected)			20.53		
45						Approximate Chi Square Value (0.05)			182.2		
46	Adjusted Level of Significance			0.0312		Adjusted Chi Square Value			178.2		
47											
48	<b>Assuming Gamma Distribution</b>										
49	95% Approximate Gamma UCL (use when n>=50))			67.22		95% Adjusted Gamma UCL (use when n<50)			68.74		
50											
51	<b>Lognormal GOF Test</b>										
52	Shapiro Wilk Test Statistic			0.944		<b>Shapiro Wilk Lognormal GOF Test</b>					
53	5% Shapiro Wilk Critical Value			0.874		Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic			0.138		<b>Lilliefors Lognormal GOF Test</b>					
55	5% Lilliefors Critical Value			0.226		Data appear Lognormal at 5% Significance Level					
56	<b>Data appear Lognormal at 5% Significance Level</b>										
57											

A	B	C	D	E	F	G	H	I	J	K	L
58	<b>Lognormal Statistics</b>										
59	Minimum of Logged Data				3.526	Mean of logged Data				3.989	
60	Maximum of Logged Data				4.554	SD of logged Data				0.336	
61											
62	<b>Assuming Lognormal Distribution</b>										
63	95% H-UCL			68.41	90% Chebyshev (MVUE) UCL				72.48		
64	95% Chebyshev (MVUE) UCL			79.52	97.5% Chebyshev (MVUE) UCL				89.3		
65	99% Chebyshev (MVUE) UCL			108.5							
66											
67	<b>Nonparametric Distribution Free UCL Statistics</b>										
68	<b>Data appear to follow a Discernible Distribution at 5% Significance Level</b>										
69											
70	<b>Nonparametric Distribution Free UCLs</b>										
71	95% CLT UCL			65.34	95% Jackknife UCL				65.99		
72	95% Standard Bootstrap UCL			64.96	95% Bootstrap-t UCL				66.58		
73	95% Hall's Bootstrap UCL			66.13	95% Percentile Bootstrap UCL				64.57		
74	95% BCA Bootstrap UCL			65.14							
75	90% Chebyshev(Mean, Sd) UCL			72.28	95% Chebyshev(Mean, Sd) UCL				79.23		
76	97.5% Chebyshev(Mean, Sd) UCL			88.88	99% Chebyshev(Mean, Sd) UCL				107.8		
77											
78	<b>Suggested UCL to Use</b>										
79	95% Student's-t UCL			65.99							
80											
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.										
82	Recommendations are based upon data size, data distribution, and skewness.										
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).										
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.										
85											
86											
87	<b>Nickel</b>										
88											
89	<b>General Statistics</b>										
90	Total Number of Observations			14	Number of Distinct Observations				14		
91					Number of Missing Observations				0		
92	Minimum			46	Mean				103.3		
93	Maximum			184	Median				79.5		
94	SD			50.86	Std. Error of Mean				13.59		
95	Coefficient of Variation			0.492	Skewness				0.511		
96											
97	<b>Normal GOF Test</b>										
98	Shapiro Wilk Test Statistic			0.877	<b>Shapiro Wilk GOF Test</b>						
99	5% Shapiro Wilk Critical Value			0.874	Data appear Normal at 5% Significance Level						
100	Lilliefors Test Statistic			0.234	<b>Lilliefors GOF Test</b>						
101	5% Lilliefors Critical Value			0.226	Data Not Normal at 5% Significance Level						
102	<b>Data appear Approximate Normal at 5% Significance Level</b>										
103											
104	<b>Assuming Normal Distribution</b>										
105	<b>95% Normal UCL</b>				<b>95% UCLs (Adjusted for Skewness)</b>						
106	95% Student's-t UCL			127.4	95% Adjusted-CLT UCL (Chen-1995)				127.6		
107					95% Modified-t UCL (Johnson-1978)				127.7		
108											
109	<b>Gamma GOF Test</b>										
110	A-D Test Statistic			0.546	<b>Anderson-Darling Gamma GOF Test</b>						
111	5% A-D Critical Value			0.739	Detected data appear Gamma Distributed at 5% Significance Level						
112	K-S Test Statistic			0.193	<b>Kolmogorov-Smirnov Gamma GOF Test</b>						
113	5% K-S Critical Value			0.23	Detected data appear Gamma Distributed at 5% Significance Level						
114	<b>Detected data appear Gamma Distributed at 5% Significance Level</b>										
115											

A	B	C	D	E	F	G	H	I	J	K	L
116	<b>Gamma Statistics</b>										
117	k hat (MLE)		4.495		k star (bias corrected MLE)		3.579				
118	Theta hat (MLE)		22.98		Theta star (bias corrected MLE)		28.86				
119	nu hat (MLE)		125.9		nu star (bias corrected)		100.2				
120	MLE Mean (bias corrected)		103.3		MLE Sd (bias corrected)		54.59				
121					Approximate Chi Square Value (0.05)		78.12				
122	Adjusted Level of Significance		0.0312		Adjusted Chi Square Value		75.54				
123											
124	<b>Assuming Gamma Distribution</b>										
125	95% Approximate Gamma UCL (use when n>=50))		132.5		95% Adjusted Gamma UCL (use when n<50)		137				
126											
127	<b>Lognormal GOF Test</b>										
128	Shapiro Wilk Test Statistic		0.912		<b>Shapiro Wilk Lognormal GOF Test</b>						
129	5% Shapiro Wilk Critical Value		0.874		Data appear Lognormal at 5% Significance Level						
130	Lilliefors Test Statistic		0.162		<b>Lilliefors Lognormal GOF Test</b>						
131	5% Lilliefors Critical Value		0.226		Data appear Lognormal at 5% Significance Level						
132	<b>Data appear Lognormal at 5% Significance Level</b>										
133											
134	<b>Lognormal Statistics</b>										
135	Minimum of Logged Data		3.829		Mean of logged Data		4.522				
136	Maximum of Logged Data		5.215		SD of logged Data		0.502				
137											
138	<b>Assuming Lognormal Distribution</b>										
139	95% H-UCL		138.1		90% Chebyshev (MVUE) UCL		146.1				
140	95% Chebyshev (MVUE) UCL		165.5		97.5% Chebyshev (MVUE) UCL		192.3				
141	99% Chebyshev (MVUE) UCL		245.1								
142											
143	<b>Nonparametric Distribution Free UCL Statistics</b>										
144	<b>Data appear to follow a Discernible Distribution at 5% Significance Level</b>										
145											
146	<b>Nonparametric Distribution Free UCLs</b>										
147	95% CLT UCL		125.6		95% Jackknife UCL		127.4				
148	95% Standard Bootstrap UCL		125.4		95% Bootstrap-t UCL		129.5				
149	95% Hall's Bootstrap UCL		124.4		95% Percentile Bootstrap UCL		125.9				
150	95% BCA Bootstrap UCL		125.5								
151	90% Chebyshev(Mean, Sd) UCL		144.1		95% Chebyshev(Mean, Sd) UCL		162.5				
152	97.5% Chebyshev(Mean, Sd) UCL		188.2		99% Chebyshev(Mean, Sd) UCL		238.5				
153											
154	<b>Suggested UCL to Use</b>										
155	95% Student's-t UCL		127.4								
156											
157	When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test										
158	When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL										
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											

# TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	A04.0320220614143700_02	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001_01</u>
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ATTACHMENT C: LABORATORY CERTIFICATES

**CHAIN OF CUSTODY RECORD**

Sydney Laboratory Unit F3 Bld F 18 Mars Road Lonsdale NSW 2068  
 Brisbane Laboratory Unit 1 21 Smallwood Place Marimb QLD 4172  
 Perth Laboratory Unit 2 91 Leach Highway Kewdale WA 6105  
 Melbourne Laboratory 8 Monkey Road Dandenong South VIC 3175

Company: <b>AGON Environmental - Tunnel Spoil Testing</b>		Project No: <b>JC0927</b>	Project Manager: <b>Craig Trimbur</b>	Sampler(s): <b>Wili - Agon Martha - Agon</b>	
Address: <b>Unit H76, 83-85 Turner St, Port Melbourne VIC 3207</b>		Project Name: <b>WGTP-Tunnel Ref: 20220531043915-Eurofin-52</b>	EDD Format: <b>EDD_EQUO.rtf</b>	Handed over by:	
Contact Name: <b>Craig Trimbur David Lawson</b>	Special Directions: <b>Please provide a minimum lab report if finalised report has not been provided by 14 days from sample receipt. Please provide eSRN along with other sample receipt documentation.</b>	Spoil Sample Preparation: <b>Spoil WGTP-521 (SW/PAW/Phenol/OCPI/PCB/PCO/Vinyl Chloride/MSM (As, Cd, Cr, Cu, Ni, Pb, Uq, Ag, Sn, Mn, Se, Zn)/C6H+CN/ Total Fluoride pH PFAS Extended Suite - 0 L- Buglog ASLP PH 5 - PFAS 0.01-0.05 ug/l ASLP Reagent - PFAS 0.01-0.05 ug/l</b>	Containers:	Required Turnaround Time (14- Days) (Lab to Lab - 14 days from receipt)	
Phone No: <b>+61 400 826 907 (Craig) +61 490 411 004 (David)</b>			Email for Invoice: <b>finance@agonenviro.com.au LabReports.TST@agonenviro.com.au</b>	500ml Plastic 250ml Plastic 125ml Plastic 200ml Amber Glass 400ml VOC vial 500ml PFAS Bottle Jar (Glass or HDPE)	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 type="checkbox"/> 5 days (Standard) <input type="checkbox"/> Other
Special Directions:			Email for Results: <b>LabReports.TST@agonenviro.com.au agonenvironmental@redel.com.au molherublabresults@wgtp.com.au Amrit.Kaur@agile-analytics.com.au</b>	Other (Autoclave, 600ml, 1000ml, 2000ml)	Sample Comments   Dangerous Goods Hazard Warning
Purchase Order:			Quote ID No: <b>Agon WGTP TST</b>		
Method of Shipment: <input checked="" type="checkbox"/> Courier (H) <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Postal	Name:	Signature:	Date:	Time:	
Received By:	Signature:	Date:	Time:	Temperature:	
Received By:	Signature:	Date:	Time:	Report No:	

893162  
Ty

CT 31/5/22-10:53am  
Yes @  
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10-3  
Counin

**Company Name:** Agon Environmental Pty Ltd - VIC  
**Address:** 3/224 Glen Osmond Road  
Fullarton  
SA 5063  
  
**Project Name:** 20220531043915-Eurofin-52  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 893162  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** May 31, 2022 10:53 AM  
**Due:** Jun 7, 2022  
**Priority:** 5 Day  
**Contact Name:** - ALL SPOIL REPORTS WGTP

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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_20220530_07_49_S_S_Triplicate_EUF	May 30, 2022		Soil	M22-My0073868		X	X	X
2	SX_OB_20220530_07_56_S_S_Primary_EUF	May 30, 2022		Soil	M22-My0073869		X	X	X
3	SX_OB_20220530_12_45_S_S_Primary_EUF	May 30, 2022		Soil	M22-My0073870		X	X	X



# Environment Testing

## Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

**Melbourne**  
6 Monterey Road  
Dandenong South VIC 3175  
Phone : +61 3 8564 5000  
NATA # 1261 Site # 1254

**Sydney**  
179 Magowar Road  
Girraween NSW 2066  
Phone : +61 2 9900 8400  
NATA # 1261 Site # 18217

**Brisbane**  
1/21 Smallwood Place  
Murarrie QLD 4172  
Phone : +61 7 3902 4600  
NATA # 1261 Site # 20794

**Newcastle**  
4/52 Industrial Drive  
Mayfield East NSW 2304  
PO Box 60 Wickham 2293  
Phone : +61 2 4968 8448  
NATA # 1261 Site # 25079

## Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

**Perth**  
46-48 Banksia Road  
Welshpool WA 6106  
Phone : +61 8 6253 4444  
NATA # 2377 Site # 2370

## Eurofins Environment Testing NZ Limited

NZBN: 9429046024954

**Auckland**  
35 O'Rorke Road  
Penrose, Auckland 1061  
Phone : +64 9 526 45 51  
IANZ # 1327

**Christchurch**  
43 Detroit Drive  
Rolleston, Christchurch 7675  
Phone : 0800 856 450  
IANZ # 1290

web: www.eurofins.com.au  
email: EnviroSales@eurofins.com

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

**Project Name:** 20220531043915-Eurofin-52  
**Project ID:** JC0927

**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 WGTP 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_20220530_12_56_S_S_Primary_EU_F	May 30, 2022		Soil	M22-My0073871		X	X	X
5	SX_OB_20220530_16_03_S_S_Primary_EU_F	May 30, 2022		Soil	M22-My0073872		X	X	X
6	SX_OB_20220530_16_04_S_S_Duplicate_EUF	May 30, 2022		Soil	M22-My0073873		X	X	X
7	SX_OB_20220530_20_04_S	May 30, 2022		Soil	M22-My0073874		X	X	X



Environment Testing

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

**Melbourne**  
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NATA # 1261 Site # 1254

**Sydney**  
179 Magowar Road  
Girraween NSW 2066  
Phone : +61 2 9900 8400  
NATA # 1261 Site # 18217

**Brisbane**  
1/21 Smallwood Place  
Murarrie QLD 4172  
Phone : +61 7 3902 4600  
NATA # 1261 Site # 20794

**Newcastle**  
4/52 Industrial Drive  
Mayfield East NSW 2304  
PO Box 60 Wickham 2293  
Phone : +61 2 4968 8448  
NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

**Perth**  
46-48 Banksia Road  
Welsphool WA 6106  
Phone : +61 8 6253 4444  
NATA # 2377 Site # 2370

Eurofins Environment Testing NZ Limited

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35 O'Rorke Road  
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43 Detroit Drive  
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**Company Name:** Agon Environmental Pty Ltd - VIC  
**Address:** 3/224 Glen Osmond Road  
Fullarton  
SA 5063  
  
**Project Name:** 20220531043915-Eurofin-52  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 893162  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** May 31, 2022 10:53 AM  
**Due:** Jun 7, 2022  
**Priority:** 5 Day  
**Contact Name:** - ALL SPOIL REPORTS WGTP

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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								
8	SX_OB_20220 531_00_11_S S_Primary_EU F	May 31, 2022		Soil	M22- My0073875		X	X	X
9	SX_OB_20220 531_04_01_S S_Primary_EU F	May 31, 2022		Soil	M22- My0073876		X	X	X
10	SX_OB_20220 530_07_49_S S_Triplicate_E UF	May 30, 2022		AUS Leachate - pH 5.0	M22- My0073877	X		X	



<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	May 31, 2022 10:53 AM
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<b>Project Name:</b>	20220531043915-Eurofin-52	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	- ALL SPOIL REPORTS WGTP

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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>									
11	SX_OB_20220530_07_56_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - pH 5.0	M22-My0073878	X		X	
12	SX_OB_20220530_12_45_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - pH 5.0	M22-My0073879	X		X	
13	SX_OB_20220530_12_56_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - pH 5.0	M22-My0073880	X		X	
14	SX_OB_20220530_16_03_S	May 30, 2022		AUS Leachate - pH 5.0	M22-My0073881	X		X	



Environment Testing

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

**Melbourne**  
6 Monterey Road  
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NATA # 1261 Site # 1254

**Sydney**  
179 Magowar Road  
Girraween NSW 2066  
Phone : +61 2 9900 8400  
NATA # 1261 Site # 18217

**Brisbane**  
1/21 Smallwood Place  
Murarrie QLD 4172  
Phone : +61 7 3902 4600  
NATA # 1261 Site # 20794

**Newcastle**  
4/52 Industrial Drive  
Mayfield East NSW 2304  
PO Box 60 Wickham 2293  
Phone : +61 2 4968 8448  
NATA # 1261 Site # 25079

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**Company Name:** Agon Environmental Pty Ltd - VIC  
**Address:** 3/224 Glen Osmond Road  
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**Project Name:** 20220531043915-Eurofin-52  
**Project ID:** JC0927

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**Contact Name:** - ALL SPOIL REPORTS WGTP

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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								
15	SX_OB_20220 530_16_04_S S_Duplicate_E UF	May 30, 2022		AUS Leachate - pH 5.0	M22- My0073882	X		X	
16	SX_OB_20220 530_20_04_S S_Primary_EU F	May 30, 2022		AUS Leachate - pH 5.0	M22- My0073883	X		X	
17	SX_OB_20220 531_00_11_S S_Primary_EU F	May 31, 2022		AUS Leachate - pH 5.0	M22- My0073884	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	May 31, 2022 10:53 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	893162	<b>Due:</b>	Jun 7, 2022
<b>Project Name:</b>	20220531043915-Eurofin-52	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	- ALL SPOIL REPORTS WGTP

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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>									
18	SX_OB_20220531_04_01_S_S_Primary_EU_F	May 31, 2022		AUS Leachate - pH 5.0	M22-My0073885	X		X	
19	SX_OB_20220530_07_49_S_S_Triplicate_EUF	May 30, 2022		AUS Leachate - Reagent Water	M22-My0073886	X		X	
20	SX_OB_20220530_07_56_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - Reagent Water	M22-My0073887	X		X	
21	SX_OB_20220530_12_45_S	May 30, 2022		AUS Leachate - Reagent	M22-My0073888	X		X	

**Company Name:** Agon Environmental Pty Ltd - VIC  
**Address:** 3/224 Glen Osmond Road  
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**Project Name:** 20220531043915-Eurofin-52  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 893162  
**Phone:** 08 8338 1009  
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**Received:** May 31, 2022 10:53 AM  
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**Priority:** 5 Day  
**Contact Name:** - ALL SPOIL REPORTS WGTP

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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					
22	SX_OB_20220 530_12_56_S S_Primary_EU F	May 30, 2022		AUS Leachate - Reagent Water	M22- My0073889	X		X	
23	SX_OB_20220 530_16_03_S S_Primary_EU F	May 30, 2022		AUS Leachate - Reagent Water	M22- My0073890	X		X	
24	SX_OB_20220 530_16_04_S S_Duplicate_E UF	May 30, 2022		AUS Leachate - Reagent Water	M22- My0073891	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	May 31, 2022 10:53 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	893162	<b>Due:</b>	Jun 7, 2022
<b>Project Name:</b>	20220531043915-Eurofin-52	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	- ALL SPOIL REPORTS WGTP

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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>									
25	SX_OB_20220530_20_04_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - Reagent Water	M22-My0073892	X		X	
26	SX_OB_20220531_00_11_S_S_Primary_EU_F	May 31, 2022		AUS Leachate - Reagent Water	M22-My0073893	X		X	
27	SX_OB_20220531_04_01_S_S_Primary_EU_F	May 31, 2022		AUS Leachate - Reagent Water	M22-My0073894	X		X	
<b>Test Counts</b>						18	9	27	9

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: - ALL SPOIL REPORTS WGTP Mother Hub

Report **893162-L**  
Project name 20220531043915-Eurofin-52  
Project ID JC0927  
Received Date May 31, 2022

Client Sample ID			SX_OB_20220 530_07_49_SS _TriPLICATE_EU F	SX_OB_20220 530_07_56_SS _Primary_EUF	SX_OB_20220 530_12_45_SS _Primary_EUF	SX_OB_20220 530_12_56_SS _Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0
Eurofins Sample No.			M22- My0073877	M22- My0073878	M22- My0073879	M22- My0073880
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 30, 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	5.1	5.1	5.0	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 (PFTTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	69	79	62	67
13C5-PFPeA (surr.)	1	%	88	76	50	81
13C5-PFHxA (surr.)	1	%	78	80	53	87
13C4-PFHpA (surr.)	1	%	77	77	53	74
13C8-PFOA (surr.)	1	%	92	95	56	89
13C5-PFNA (surr.)	1	%	95	79	54	103
13C6-PFDA (surr.)	1	%	86	72	52	82
13C2-PFUnDA (surr.)	1	%	79	61	54	101
13C2-PFDoDA (surr.)	1	%	77	60	49	81
13C2-PFTTeDA (surr.)	1	%	77	42	27	48

Client Sample ID			SX_OB_20220 530_07_49_SS _TriPLICATE_EU F	SX_OB_20220 530_07_56_SS _Primary_EUF	SX_OB_20220 530_12_45_SS _Primary_EUF	SX_OB_20220 530_12_56_SS _Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0
Eurofins Sample No.			M22- My0073877	M22- My0073878	M22- My0073879	M22- My0073880
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 30, 2022
Test/Reference	LOR	Unit				
<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	%	47	26	16	88
D3-N-MeFOSA (surr.)	1	%	47	46	26	39
D5-N-EtFOSA (surr.)	1	%	12	21	13	45
D7-N-MeFOSE (surr.)	1	%	18	11	37	66
D9-N-EtFOSE (surr.)	1	%	14	15	40	57
D5-N-EtFOSAA (surr.)	1	%	64	55	32	97
D3-N-MeFOSAA (surr.)	1	%	58	48	39	81
<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	%	125	93	53	87
18O2-PFHxS (surr.)	1	%	95	81	56	89
13C8-PFOS (surr.)	1	%	96	70	54	84
<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	%	89	54	86	77
13C2-6:2 FTSA (surr.)	1	%	88	51	76	104
13C2-8:2 FTSA (surr.)	1	%	48	40	65	150
13C2-10:2 FTSA (surr.)	1	%	59	51	74	70
<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 530_16_03_SS _Primary_EUF	SX_OB_20220 530_16_04_SS Duplicate_EU F	SX_OB_20220 530_20_04_SS _Primary_EUF	SX_OB_20220 531_00_11_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- My0073881	M22- My0073882	M22- My0073883	M22- My0073884
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 31, 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	5.1	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 (PFTTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	61	61	59	101
13C5-PFPeA (surr.)	1	%	60	65	51	93
13C5-PFHxA (surr.)	1	%	51	54	52	93
13C4-PFHpA (surr.)	1	%	55	53	51	101
13C8-PFOA (surr.)	1	%	55	51	49	92
13C5-PFNA (surr.)	1	%	53	53	52	100
13C6-PFDA (surr.)	1	%	51	53	44	109
13C2-PFUnDA (surr.)	1	%	56	60	49	129
13C2-PFDoDA (surr.)	1	%	52	53	45	123
13C2-PFTTeDA (surr.)	1	%	42	38	34	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
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	%	25	28	22	22
D3-N-MeFOSA (surr.)	1	%	32	43	39	20
D5-N-EtFOSA (surr.)	1	%	32	47	39	10
D7-N-MeFOSE (surr.)	1	%	12	13	17	21
D9-N-EtFOSE (surr.)	1	%	12	11	13	19
D5-N-EtFOSAA (surr.)	1	%	35	38	32	125
D3-N-MeFOSAA (surr.)	1	%	34	33	33	111



Client Sample ID			SX_OB_20220 530_16_03_SS _Primary_EUF	SX_OB_20220 530_16_04_SS _Duplicate_EU F	SX_OB_20220 530_20_04_SS _Primary_EUF	SX_OB_20220 531_00_11_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- My0073881	M22- My0073882	M22- My0073883	M22- My0073884
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 31, 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	%	51	54	51	66
18O2-PFHxS (surr.)	1	%	55	58	52	100
13C8-PFOS (surr.)	1	%	51	59	51	108
<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	%	73	77	69	114
13C2-6:2 FTSA (surr.)	1	%	64	63	61	104
13C2-8:2 FTSA (surr.)	1	%	53	53	55	84
13C2-10:2 FTSA (surr.)	1	%	72	74	60	100
<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 531_04_01_SS _Primary_EUF	SX_OB_20220 530_07_49_SS _Triplicate_EU F	SX_OB_20220 530_07_56_SS _Primary_EUF	SX_OB_20220 530_12_45_SS _Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0073885	M22- My0073886	M22- My0073887	M22- My0073888
Date Sampled			May 31, 2022	May 30, 2022	May 30, 2022	May 30, 2022
Test/Reference	LOR	Unit				
<b>AUS Leaching Procedure</b>						
Leachate Fluid <sup>C01</sup>		comment	1.0	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	5.0	7.1	7.1	7.1
pH (off)	0.1	pH Units	5.1	8.0	8.4	8.2

Client Sample ID			SX_OB_20220 531_04_01_SS _Primary_EUF	SX_OB_20220 530_07_49_SS _TriPLICATE_EU F	SX_OB_20220 530_07_56_SS _Primary_EUF	SX_OB_20220 530_12_45_SS _Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0073885	M22- My0073886	M22- My0073887	M22- My0073888
Date Sampled			May 31, 2022	May 30, 2022	May 30, 2022	May 30, 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	%	83	93	82	95
13C5-PFPeA (surr.)	1	%	90	82	81	89
13C5-PFHxA (surr.)	1	%	86	81	85	94
13C4-PFHpA (surr.)	1	%	82	81	79	96
13C8-PFOA (surr.)	1	%	91	89	96	96
13C5-PFNA (surr.)	1	%	86	95	89	91
13C6-PFDA (surr.)	1	%	74	98	99	105
13C2-PFUnDA (surr.)	1	%	67	129	114	119
13C2-PFDoDA (surr.)	1	%	61	125	95	113
13C2-PFTeDA (surr.)	1	%	41	77	65	58
<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	%	48	63	116	14
D3-N-MeFOSA (surr.)	1	%	81	13	17	20
D5-N-EtFOSA (surr.)	1	%	24	16	11	19
D7-N-MeFOSE (surr.)	1	%	21	28	95	13
D9-N-EtFOSE (surr.)	1	%	14	21	76	23
D5-N-EtFOSAA (surr.)	1	%	54	122	100	108
D3-N-MeFOSAA (surr.)	1	%	63	116	110	104
<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

Client Sample ID			SX_OB_20220 531_04_01_SS _Primary_EUF	SX_OB_20220 530_07_49_SS _Triplicate_EU F	SX_OB_20220 530_07_56_SS _Primary_EUF	SX_OB_20220 530_12_45_SS _Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0073885	M22- My0073886	M22- My0073887	M22- My0073888
Date Sampled			May 31, 2022	May 30, 2022	May 30, 2022	May 30, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
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	%	100	57	67	108
18O2-PFHxS (surr.)	1	%	86	94	81	102
13C8-PFOS (surr.)	1	%	80	104	109	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	< 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	%	50	100	89	103
13C2-6:2 FTSA (surr.)	1	%	49	110	70	86
13C2-8:2 FTSA (surr.)	1	%	45	79	73	56
13C2-10:2 FTSA (surr.)	1	%	49	93	71	89
<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 530_12_56_SS _Primary_EUF	SX_OB_20220 530_16_03_SS _Primary_EUF	SX_OB_20220 530_16_04_SS _Duplicate_EU F	SX_OB_20220 530_20_04_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- My0073889	M22- My0073890	M22- My0073891	M22- My0073892
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 30, 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	7.1	7.1	7.1	7.1
pH (off)	0.1	pH Units	8.6	8.2	8.3	8.1
<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

Client Sample ID			SX_OB_20220 530_12_56_SS _Primary_EUF	SX_OB_20220 530_16_03_SS _Primary_EUF	SX_OB_20220 530_16_04_SS _Duplicate_EU F	SX_OB_20220 530_20_04_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- My0073889	M22- My0073890	M22- My0073891	M22- My0073892
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 30, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
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	%	72	87	81	78
13C5-PFPeA (surr.)	1	%	122	80	74	81
13C5-PFHxA (surr.)	1	%	85	82	75	77
13C4-PFHpA (surr.)	1	%	112	81	74	79
13C8-PFOA (surr.)	1	%	106	103	103	83
13C5-PFNA (surr.)	1	%	66	93	86	76
13C6-PFDA (surr.)	1	%	105	98	94	60
13C2-PFUnDA (surr.)	1	%	50	117	108	15
13C2-PFDoDA (surr.)	1	%	38	102	76	16
13C2-PFTeDA (surr.)	1	%	14	78	30	14
<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	%	20	102	107	10
D3-N-MeFOSA (surr.)	1	%	13	17	37	14
D5-N-EtFOSA (surr.)	1	%	17	12	26	12
D7-N-MeFOSE (surr.)	1	%	13	81	95	13
D9-N-EtFOSE (surr.)	1	%	15	64	74	13
D5-N-EtFOSAA (surr.)	1	%	61	104	89	25
D3-N-MeFOSAA (surr.)	1	%	67	109	97	27
<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	%	107	93	90	81
18O2-PFHxS (surr.)	1	%	90	96	82	75
13C8-PFOS (surr.)	1	%	75	108	104	56

<b>Client Sample ID</b>			<b>SX_OB_20220 530_12_56_SS _Primary_EUF</b>	<b>SX_OB_20220 530_16_03_SS _Primary_EUF</b>	<b>SX_OB_20220 530_16_04_SS _Duplicate_EU F</b>	<b>SX_OB_20220 530_20_04_SS _Primary_EUF</b>
<b>Sample Matrix</b>			<b>AUS Leachate - Reagent Water</b>	<b>AUS Leachate - Reagent Water</b>	<b>AUS Leachate - Reagent Water</b>	<b>AUS Leachate - Reagent Water</b>
<b>Eurofins Sample No.</b>			<b>M22- My0073889</b>	<b>M22- My0073890</b>	<b>M22- My0073891</b>	<b>M22- My0073892</b>
<b>Date Sampled</b>			<b>May 30, 2022</b>	<b>May 30, 2022</b>	<b>May 30, 2022</b>	<b>May 30, 2022</b>
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	%	138	55	50	42
13C2-6:2 FTSA (surr.)	1	%	12	68	56	53
13C2-8:2 FTSA (surr.)	1	%	56	67	62	58
13C2-10:2 FTSA (surr.)	1	%	38	86	71	11
<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

<b>Client Sample ID</b>			<b>SX_OB_20220 531_00_11_SS _Primary_EUF</b>	<b>SX_OB_20220 531_04_01_SS _Primary_EUF</b>
<b>Sample Matrix</b>			<b>AUS Leachate - Reagent Water</b>	<b>AUS Leachate - Reagent Water</b>
<b>Eurofins Sample No.</b>			<b>M22- My0073893</b>	<b>M22- My0073894</b>
<b>Date Sampled</b>			<b>May 31, 2022</b>	<b>May 31, 2022</b>
Test/Reference	LOR	Unit		
<b>AUS Leaching Procedure</b>				
Leachate Fluid <sup>C01</sup>		comment	4.0	4.0
pH (initial)	0.1	pH Units	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	7.1	7.1
pH (off)	0.1	pH Units	7.7	8.5
<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	%	81	92

Client Sample ID			SX_OB_20220 531_00_11_SS _Primary_EUF	SX_OB_20220 531_04_01_SS _Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0073893	M22- My0073894
Date Sampled			May 31, 2022	May 31, 2022
Test/Reference	LOR	Unit		
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				
13C5-PFPeA (surr.)	1	%	95	91
13C5-PFHxA (surr.)	1	%	75	89
13C4-PFHpA (surr.)	1	%	102	90
13C8-PFOA (surr.)	1	%	123	109
13C5-PFNA (surr.)	1	%	79	94
13C6-PFDA (surr.)	1	%	70	105
13C2-PFUnDA (surr.)	1	%	61	125
13C2-PFDoDA (surr.)	1	%	50	94
13C2-PFTeDA (surr.)	1	%	24	38
<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	%	33	39
D3-N-MeFOSA (surr.)	1	%	11	14
D5-N-EtFOSA (surr.)	1	%	11	24
D7-N-MeFOSE (surr.)	1	%	19	23
D9-N-EtFOSE (surr.)	1	%	10	13
D5-N-EtFOSAA (surr.)	1	%	75	114
D3-N-MeFOSAA (surr.)	1	%	87	113
<b>Perfluoroalkyl sulfonic acids (PFSA)</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	%	118	106
18O2-PFHxS (surr.)	1	%	116	98
13C8-PFOS (surr.)	1	%	78	119

<b>Client Sample ID</b>			<b>SX_OB_20220 531_00_11_SS _Primary_EUF</b>	<b>SX_OB_20220 531_04_01_SS _Primary_EUF</b>
<b>Sample Matrix</b>			<b>AUS Leachate - Reagent Water</b>	<b>AUS Leachate - Reagent Water</b>
<b>Eurofins Sample No.</b>			<b>M22- My0073893</b>	<b>M22- My0073894</b>
<b>Date Sampled</b>			<b>May 31, 2022</b>	<b>May 31, 2022</b>
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
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	%	81	69
13C2-6:2 FTSA (surr.)	1	%	128	73
13C2-8:2 FTSA (surr.)	1	%	64	67
13C2-10:2 FTSA (surr.)	1	%	45	81
<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
AUS Leaching Procedure			
pH (initial) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	May 31, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	May 31, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	May 31, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 31, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 31, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 06, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 31, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 31, 2022	



<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	May 31, 2022 10:53 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	893162	<b>Due:</b>	Jun 7, 2022
<b>Project Name:</b>	20220531043915-Eurofin-52	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	- ALL SPOIL REPORTS WGTP

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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_20220530_07_49_S_S_Triplicate_EUF	May 30, 2022		Soil	M22-My0073868		X	X	X
2	SX_OB_20220530_07_56_S_S_Primary_EUF	May 30, 2022		Soil	M22-My0073869		X	X	X
3	SX_OB_20220530_12_45_S_S_Primary_EUF	May 30, 2022		Soil	M22-My0073870		X	X	X

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<b>Project Name:</b>	20220531043915-Eurofin-52	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	- ALL SPOIL REPORTS WGTP

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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_20220530_12_56_S_S_Primary_EU_F	May 30, 2022		Soil	M22-My0073871		X	X	X
5	SX_OB_20220530_16_03_S_S_Primary_EU_F	May 30, 2022		Soil	M22-My0073872		X	X	X
6	SX_OB_20220530_16_04_S_S_Duplicate_EUF	May 30, 2022		Soil	M22-My0073873		X	X	X
7	SX_OB_20220530_20_04_S	May 30, 2022		Soil	M22-My0073874		X	X	X

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	May 31, 2022 10:53 AM
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<b>Project Name:</b>	20220531043915-Eurofin-52	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	- ALL SPOIL REPORTS WGTP

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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								
8	SX_OB_20220 531_00_11_S S_Primary_EU F	May 31, 2022		Soil	M22- My0073875		X	X	X
9	SX_OB_20220 531_04_01_S S_Primary_EU F	May 31, 2022		Soil	M22- My0073876		X	X	X
10	SX_OB_20220 530_07_49_S S_Triplicate_E UF	May 30, 2022		AUS Leachate - pH 5.0	M22- My0073877	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	May 31, 2022 10:53 AM
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<b>Project Name:</b>	20220531043915-Eurofin-52	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	- ALL SPOIL REPORTS WGTP

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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>									
11	SX_OB_20220530_07_56_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - pH 5.0	M22-My0073878	X		X	
12	SX_OB_20220530_12_45_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - pH 5.0	M22-My0073879	X		X	
13	SX_OB_20220530_12_56_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - pH 5.0	M22-My0073880	X		X	
14	SX_OB_20220530_16_03_S	May 30, 2022		AUS Leachate - pH 5.0	M22-My0073881	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	May 31, 2022 10:53 AM
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<b>Project Name:</b>	20220531043915-Eurofin-52	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	- ALL SPOIL REPORTS WGTP

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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								
15	SX_OB_20220 530_16_04_S S_Duplicate_E UF	May 30, 2022		AUS Leachate - pH 5.0	M22- My0073882	X		X	
16	SX_OB_20220 530_20_04_S S_Primary_EU F	May 30, 2022		AUS Leachate - pH 5.0	M22- My0073883	X		X	
17	SX_OB_20220 531_00_11_S S_Primary_EU F	May 31, 2022		AUS Leachate - pH 5.0	M22- My0073884	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	May 31, 2022 10:53 AM
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<b>Project Name:</b>	20220531043915-Eurofin-52	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	- ALL SPOIL REPORTS WGTP

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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>									
18	SX_OB_20220531_04_01_S_S_Primary_EU_F	May 31, 2022		AUS Leachate - pH 5.0	M22-My0073885	X		X	
19	SX_OB_20220530_07_49_S_S_Triplicate_EUF	May 30, 2022		AUS Leachate - Reagent Water	M22-My0073886	X		X	
20	SX_OB_20220530_07_56_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - Reagent Water	M22-My0073887	X		X	
21	SX_OB_20220530_12_45_S	May 30, 2022		AUS Leachate - Reagent	M22-My0073888	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	May 31, 2022 10:53 AM
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<b>Project Name:</b>	20220531043915-Eurofin-52	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	- ALL SPOIL REPORTS WGTP

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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					
22	SX_OB_20220 530_12_56_S S_Primary_EU F	May 30, 2022		AUS Leachate - Reagent Water	M22- My0073889	X		X	
23	SX_OB_20220 530_16_03_S S_Primary_EU F	May 30, 2022		AUS Leachate - Reagent Water	M22- My0073890	X		X	
24	SX_OB_20220 530_16_04_S S_Duplicate_E UF	May 30, 2022		AUS Leachate - Reagent Water	M22- My0073891	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	May 31, 2022 10:53 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	893162	<b>Due:</b>	Jun 7, 2022
<b>Project Name:</b>	20220531043915-Eurofin-52	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	- ALL SPOIL REPORTS WGTP

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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>									
25	SX_OB_20220530_20_04_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - Reagent Water	M22-My0073892	X		X	
26	SX_OB_20220531_00_11_S_S_Primary_EU_F	May 31, 2022		AUS Leachate - Reagent Water	M22-My0073893	X		X	
27	SX_OB_20220531_04_01_S_S_Primary_EU_F	May 31, 2022		AUS Leachate - Reagent Water	M22-My0073894	X		X	
<b>Test Counts</b>						18	9	27	9



## 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 (PFSA)</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)	%	108		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	89		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	102		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	93		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	101		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	94		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	89		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	101		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	108		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	136		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	111		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)	%	76			50-150	Pass			
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	110			50-150	Pass			
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	105			50-150	Pass			
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	89			50-150	Pass			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	108			50-150	Pass			
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	95			50-150	Pass			
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	91			50-150	Pass			
<b>LCS - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>									
Perfluorobutanesulfonic acid (PFBS)	%	88			50-150	Pass			
Perfluorononanesulfonic acid (PFNS)	%	107			50-150	Pass			
Perfluoropropanesulfonic acid (PFPrS)	%	109			50-150	Pass			
Perfluoropentanesulfonic acid (PFPeS)	%	97			50-150	Pass			
Perfluorohexanesulfonic acid (PFHxS)	%	104			50-150	Pass			
Perfluoroheptanesulfonic acid (PFHpS)	%	101			50-150	Pass			
Perfluorooctanesulfonic acid (PFOS)	%	98			50-150	Pass			
Perfluorodecanesulfonic acid (PFDS)	%	83			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)	%	102			50-150	Pass			
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	113			50-150	Pass			
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	133			50-150	Pass			
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	84			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-My0073890	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-My0073890	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-My0073890	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0073890	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0073890	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0073890	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0073890	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-My0073890	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0073890	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-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-My0073890	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-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0073890	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0073890	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0073890	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
N09	Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).

**Authorised by:**

Catherine Wilson	Analytical Services Manager
Joseph Edouard	Senior Analyst-PFAS
Mary Makarios	Senior Analyst-Sample Properties



**Glenn Jackson**  
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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



NATA Accredited  
Accreditation Number 1261  
Site Number 1254

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

Attention: - ALL SPOIL REPORTS WGTP Mother Hub

Report **893162-S**  
Project name 20220531043915-Eurofin-52  
Project ID JC0927  
Received Date May 31, 2022

Client Sample ID			SX_OB_20220 530_07_49_SS _TriPLICATE_EU F	SX_OB_20220 530_07_56_SS _Primary_EUF	SX_OB_20220 530_12_45_SS _Primary_EUF	SX_OB_20220 530_12_56_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0073868	M22- My0073869	M22- My0073870	M22- My0073871
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 30, 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

Client Sample ID			SX_OB_20220 530_07_49_SS _TriPLICATE_EU F	SX_OB_20220 530_07_56_SS _Primary_EUF	SX_OB_20220 530_12_45_SS _Primary_EUF	SX_OB_20220 530_12_56_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0073868	M22- My0073869	M22- My0073870	M22- My0073871
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 30, 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	%	63	67	51	52
Toluene-d8 (surr.)	1	%	57	64	95	96
<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

Client Sample ID			SX_OB_20220 530_07_49_SS _TriPLICATE_EU F	SX_OB_20220 530_07_56_SS _Primary_EUF	SX_OB_20220 530_12_45_SS _Primary_EUF	SX_OB_20220 530_12_56_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0073868	M22- My0073869	M22- My0073870	M22- My0073871
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 30, 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
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	%	86	81	81	84
p-Terphenyl-d14 (surr.)	1	%	73	78	72	80
<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	%	86	68	72	135
Tetrachloro-m-xylene (surr.)	1	%	86	92	86	89



Client Sample ID			SX_OB_20220 530_07_49_SS _TriPLICATE_EU F	SX_OB_20220 530_07_56_SS _Primary_EUF	SX_OB_20220 530_12_45_SS _Primary_EUF	SX_OB_20220 530_12_56_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0073868	M22- My0073869	M22- My0073870	M22- My0073871
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 30, 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	%	86	68	72	135
Tetrachloro-m-xylene (surr.)	1	%	86	92	86	89
<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	%	92	95	90	94
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	120	130	160
<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	6.5	6.6	6.7	7.3
<b>% Moisture</b>						
% Moisture	1	%	31	31	35	36
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	77	40	35	39
Cadmium	1	mg/kg	< 1	< 1	< 1	< 1
Chromium	5	mg/kg	110	100	150	150
Copper	5	mg/kg	57	47	67	72
Lead	5	mg/kg	8.3	5.8	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_OB_20220 530_07_49_SS _TriPLICATE_EU F	SX_OB_20220 530_07_56_SS _Primary_EUF	SX_OB_20220 530_12_45_SS _Primary_EUF	SX_OB_20220 530_12_56_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0073868	M22- My0073869	M22- My0073870	M22- My0073871
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 30, 2022
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	85	150	190	200
Selenium	5	mg/kg	< 5	< 5	< 5	< 5
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	61	94	140	160
<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	%	83	81	83	80
13C5-PFPeA (surr.)	1	%	94	87	90	89
13C5-PFHxA (surr.)	1	%	93	94	98	87
13C4-PFHpA (surr.)	1	%	95	91	96	87
13C8-PFOA (surr.)	1	%	96	94	101	94
13C5-PFNA (surr.)	1	%	104	104	105	101
13C6-PFDA (surr.)	1	%	110	103	104	106
13C2-PFUnDA (surr.)	1	%	115	110	118	114
13C2-PFDoDA (surr.)	1	%	102	92	99	97
13C2-PFTeDA (surr.)	1	%	115	105	100	108
<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	%	113	103	100	104
D3-N-MeFOSA (surr.)	1	%	134	128	111	124
D5-N-EtFOSA (surr.)	1	%	120	116	106	114
D7-N-MeFOSE (surr.)	1	%	93	91	83	88
D9-N-EtFOSE (surr.)	1	%	101	98	92	93
D5-N-EtFOSAA (surr.)	1	%	113	108	102	107
D3-N-MeFOSAA (surr.)	1	%	111	118	123	120

Client Sample ID			SX_OB_20220 530_07_49_SS _TriPLICATE_EU F	SX_OB_20220 530_07_56_SS _Primary_EUF	SX_OB_20220 530_12_45_SS _Primary_EUF	SX_OB_20220 530_12_56_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0073868	M22- My0073869	M22- My0073870	M22- My0073871
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 30, 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	%	93	95	92	90
18O2-PFHxS (surr.)	1	%	87	89	89	86
13C8-PFOS (surr.)	1	%	90	82	85	87
<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	%	101	112	109	94
13C2-6:2 FTSA (surr.)	1	%	87	83	95	79
13C2-8:2 FTSA (surr.)	1	%	122	120	105	119
13C2-10:2 FTSA (surr.)	1	%	107	103	108	96
<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 530_16_03_SS _Primary_EUF	SX_OB_20220 530_16_04_SS _Duplicate_EU F	SX_OB_20220 530_20_04_SS _Primary_EUF	SX_OB_20220 531_00_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0073872	M22- My0073873	M22- My0073874	M22- My0073875
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 31, 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

Client Sample ID			SX_OB_20220 530_16_03_SS _Primary_EUF	SX_OB_20220 530_16_04_SS _Duplicate_EU F	SX_OB_20220 530_20_04_SS _Primary_EUF	SX_OB_20220 531_00_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0073872	M22- My0073873	M22- My0073874	M22- My0073875
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 31, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
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
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

Client Sample ID			SX_OB_20220 530_16_03_SS _Primary_EUF	SX_OB_20220 530_16_04_SS Duplicate_EU F	SX_OB_20220 530_20_04_SS _Primary_EUF	SX_OB_20220 531_00_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0073872	M22- My0073873	M22- My0073874	M22- My0073875
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 31, 2022
Test/Reference	LOR	Unit				
<b>Volatile Organics</b>						
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	%	83	78	74	54
Toluene-d8 (surr.)	1	%	86	77	67	54
<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	%	85	84	92	84
p-Terphenyl-d14 (surr.)	1	%	75	74	82	74

Client Sample ID			SX_OB_20220 530_16_03_SS _Primary_EUF	SX_OB_20220 530_16_04_SS Duplicate_EU F	SX_OB_20220 530_20_04_SS _Primary_EUF	SX_OB_20220 531_00_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0073872	M22- My0073873	M22- My0073874	M22- My0073875
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 31, 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
Dibutylchlorendate (surr.)	1	%	135	72	101	90
Tetrachloro-m-xylene (surr.)	1	%	87	87	92	84
<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	%	135	72	101	90
Tetrachloro-m-xylene (surr.)	1	%	87	87	92	84
<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

Client Sample ID			SX_OB_20220 530_16_03_SS _Primary_EUF	SX_OB_20220 530_16_04_SS Duplicate_EU F	SX_OB_20220 530_20_04_SS _Primary_EUF	SX_OB_20220 531_00_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0073872	M22- My0073873	M22- My0073874	M22- My0073875
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 31, 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	%	90	91	98	88
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	140
<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	6.5	6.9	6.7	6.7
<b>% Moisture</b>						
% Moisture	1	%	30	30	31	33
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	85	52	50	35
Cadmium	1	mg/kg	< 1	< 1	< 1	< 1
Chromium	5	mg/kg	130	110	150	130
Copper	5	mg/kg	68	58	73	40
Lead	5	mg/kg	5.2	5.1	5.2	7.8
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	160	150	180	82
Selenium	5	mg/kg	< 5	< 5	< 5	< 5
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	120	100	120	35
<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	%	77	86	76	75
13C5-PFPeA (surr.)	1	%	82	94	81	94
13C5-PFHxA (surr.)	1	%	87	96	85	84

Client Sample ID			SX_OB_20220 530_16_03_SS _Primary_EUF	SX_OB_20220 530_16_04_SS Duplicate_EU F	SX_OB_20220 530_20_04_SS _Primary_EUF	SX_OB_20220 531_00_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0073872	M22- My0073873	M22- My0073874	M22- My0073875
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 31, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
13C4-PFHpA (surr.)	1	%	86	94	84	78
13C8-PFOA (surr.)	1	%	91	97	86	91
13C5-PFNA (surr.)	1	%	95	105	96	92
13C6-PFDA (surr.)	1	%	101	113	96	100
13C2-PFUnDA (surr.)	1	%	114	123	103	100
13C2-PFDoDA (surr.)	1	%	92	100	89	91
13C2-PFTeDA (surr.)	1	%	106	115	106	103
<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	%	103	115	99	101
D3-N-MeFOSA (surr.)	1	%	122	133	118	117
D5-N-EtFOSA (surr.)	1	%	114	124	106	106
D7-N-MeFOSE (surr.)	1	%	83	93	80	83
D9-N-EtFOSE (surr.)	1	%	92	96	86	86
D5-N-EtFOSAA (surr.)	1	%	106	120	102	103
D3-N-MeFOSAA (surr.)	1	%	120	138	121	114
<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	%	85	98	89	84
18O2-PFHxS (surr.)	1	%	86	89	81	84
13C8-PFOS (surr.)	1	%	85	91	86	85
<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	%	93	104	104	102
13C2-6:2 FTSA (surr.)	1	%	79	96	87	87



Client Sample ID			SX_OB_20220 530_16_03_SS _Primary_EUF	SX_OB_20220 530_16_04_SS Duplicate_EU F	SX_OB_20220 530_20_04_SS _Primary_EUF	SX_OB_20220 531_00_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0073872	M22- My0073873	M22- My0073874	M22- My0073875
Date Sampled			May 30, 2022	May 30, 2022	May 30, 2022	May 31, 2022
Test/Reference	LOR	Unit				
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
13C2-8:2 FTSA (surr.)	1	%	118	119	111	110
13C2-10:2 FTSA (surr.)	1	%	109	121	112	108
<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 531_04_01_SS _Primary_EUF
Sample Matrix			Soil
Eurofins Sample No.			M22- My0073876
Date Sampled			May 31, 2022
Test/Reference	LOR	Unit	
<b>Total Recoverable Hydrocarbons</b>			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100
<b>Volatile Organics</b>			
Hexachlorobutadiene	0.5	mg/kg	< 0.5
<b>Volatile Organics</b>			
1.1-Dichloroethane	0.5	mg/kg	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5
1.1-Dichloroethane	0.5	mg/kg	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5

<b>Client Sample ID</b>			<b>SX_OB_20220</b>
<b>Sample Matrix</b>			<b>531_04_01_SS</b>
<b>Eurofins Sample No.</b>			<b>_Primary_EUF</b>
<b>Date Sampled</b>			<b>Soil</b>
<b>Test/Reference</b>	<b>LOR</b>	<b>Unit</b>	<b>M22-My0073876</b>
			<b>May 31, 2022</b>
<b>Volatile Organics</b>			
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5
Benzene	0.1	mg/kg	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5
Bromoform	0.5	mg/kg	< 0.5
Bromomethane	0.5	mg/kg	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5
Chloroethane	0.5	mg/kg	< 0.5
Chloroform	0.5	mg/kg	< 0.5
Chloromethane	0.5	mg/kg	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1
Iodomethane	0.5	mg/kg	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5
o-Xylene	0.1	mg/kg	< 0.1
Styrene	0.5	mg/kg	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5
Toluene	0.1	mg/kg	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3
Total MAH*	0.5	mg/kg	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5
4-Bromofluorobenzene (surr.)	1	%	82
Toluene-d8 (surr.)	1	%	74

<b>Client Sample ID</b>			<b>SX_OB_20220</b>
<b>Sample Matrix</b>			<b>531_04_01_SS</b>
<b>Eurofins Sample No.</b>			<b>Primary_EUF</b>
<b>Date Sampled</b>			<b>Soil</b>
<b>Test/Reference</b>	LOR	Unit	<b>M22-My0073876</b>
			<b>May 31, 2022</b>
<b>Polycyclic Aromatic Hydrocarbons</b>			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	82
p-Terphenyl-d14 (surr.)	1	%	74
<b>Organochlorine Pesticides</b>			
Chlordanes - Total	0.1	mg/kg	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05
a-HCH	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-HCH	0.05	mg/kg	< 0.05
d-HCH	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxaphene	0.5	mg/kg	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1

<b>Client Sample ID</b>			<b>SX_OB_20220</b>
<b>Sample Matrix</b>			<b>531_04_01_SS</b>
<b>Eurofins Sample No.</b>			<b>_Primary_EUF</b>
<b>Date Sampled</b>			<b>Soil</b>
<b>Test/Reference</b>	LOR	Unit	<b>M22-My0073876</b>
			<b>May 31, 2022</b>
<b>Organochlorine Pesticides</b>			
Dibutylchlorendate (surr.)	1	%	131
Tetrachloro-m-xylene (surr.)	1	%	86
<b>Polychlorinated Biphenyls</b>			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1
Total PCB*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	131
Tetrachloro-m-xylene (surr.)	1	%	86
<b>Phenols (Halogenated)</b>			
2-Chlorophenol	0.5	mg/kg	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1
Pentachlorophenol	1	mg/kg	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10
Total Halogenated Phenol*	1	mg/kg	< 1
<b>Phenols (non-Halogenated)</b>			
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5
2-Nitrophenol	1.0	mg/kg	< 1
2,4-Dimethylphenol	0.5	mg/kg	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4
Total cresols*	0.5	mg/kg	< 0.5
4-Nitrophenol	5	mg/kg	< 5
Dinoseb	20	mg/kg	< 20
Phenol	0.5	mg/kg	< 0.5
Phenol-d6 (surr.)	1	%	91
Total Non-Halogenated Phenol*	20	mg/kg	< 20
<b>Chromium (hexavalent)</b>			
Chromium (hexavalent)	1	mg/kg	< 1
Cyanide (total)	5	mg/kg	< 5
Fluoride (Total)	100	mg/kg	< 100
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	6.7
% Moisture	1	%	31

<b>Client Sample ID</b>			<b>SX_OB_20220</b>
<b>Sample Matrix</b>			<b>531_04_01_SS</b>
<b>Eurofins Sample No.</b>			<b>Primary_EUF</b>
<b>Date Sampled</b>			<b>Soil</b>
<b>Test/Reference</b>	LOR	Unit	<b>M22-My0073876</b>
			<b>May 31, 2022</b>
<b>Heavy Metals</b>			
Arsenic	2	mg/kg	34
Cadmium	1	mg/kg	< 1
Chromium	5	mg/kg	120
Copper	5	mg/kg	62
Lead	5	mg/kg	< 5
Mercury	0.1	mg/kg	< 0.1
Molybdenum	5	mg/kg	< 5
Nickel	5	mg/kg	180
Selenium	5	mg/kg	< 5
Silver	2	mg/kg	< 2
Tin	10	mg/kg	< 10
Zinc	5	mg/kg	120
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>			
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	5	ug/kg	< 5
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	5	ug/kg	< 5
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	5	ug/kg	< 5
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	5	ug/kg	< 5
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	5	ug/kg	< 5
Perfluorononanoic acid (PFNA) <sup>N11</sup>	5	ug/kg	< 5
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	5	ug/kg	< 5
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	5	ug/kg	< 5
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	5	ug/kg	< 5
Perfluorotridecanoic acid (PFTeDA) <sup>N15</sup>	5	ug/kg	< 5
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	5	ug/kg	< 5
13C4-PFBA (surr.)	1	%	78
13C5-PFPeA (surr.)	1	%	82
13C5-PFHxA (surr.)	1	%	91
13C4-PFHpA (surr.)	1	%	86
13C8-PFOA (surr.)	1	%	89
13C5-PFNA (surr.)	1	%	97
13C6-PFDA (surr.)	1	%	103
13C2-PFUnDA (surr.)	1	%	106
13C2-PFDoDA (surr.)	1	%	91
13C2-PFTeDA (surr.)	1	%	107
<b>Perfluoroalkyl sulfonamido substances</b>			
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	5	ug/kg	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	5	ug/kg	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	5	ug/kg	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	5	ug/kg	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	5	ug/kg	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	10	ug/kg	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	10	ug/kg	< 10
13C8-FOSA (surr.)	1	%	105
D3-N-MeFOSA (surr.)	1	%	119

<b>Client Sample ID</b>			<b>SX_OB_20220</b>
<b>Sample Matrix</b>			<b>531_04_01_SS</b>
<b>Eurofins Sample No.</b>			<b>_Primary_EUF</b>
<b>Date Sampled</b>			<b>Soil</b>
<b>Test/Reference</b>	LOR	Unit	<b>M22-My0073876</b>
			<b>May 31, 2022</b>
<b>Perfluoroalkyl sulfonamido substances</b>			
D5-N-EtFOSA (surr.)	1	%	103
D7-N-MeFOSE (surr.)	1	%	84
D9-N-EtFOSE (surr.)	1	%	91
D5-N-EtFOSAA (surr.)	1	%	104
D3-N-MeFOSAA (surr.)	1	%	109
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>			
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	5	ug/kg	< 5
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	5	ug/kg	< 5
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	5	ug/kg	< 5
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	5	ug/kg	< 5
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	5	ug/kg	< 5
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	5	ug/kg	< 5
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	5	ug/kg	< 5
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	5	ug/kg	< 5
13C3-PFBS (surr.)	1	%	90
18O2-PFHxS (surr.)	1	%	81
13C8-PFOS (surr.)	1	%	87
<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
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	10	ug/kg	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5
13C2-4:2 FTSA (surr.)	1	%	96
13C2-6:2 FTSA (surr.)	1	%	82
13C2-8:2 FTSA (surr.)	1	%	120
13C2-10:2 FTSA (surr.)	1	%	98
<b>PFASs Summations</b>			
Sum (PFHxS + PFOS)*	5	ug/kg	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 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	May 31, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 31, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 31, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	May 31, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	May 31, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 31, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	May 31, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	May 31, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 31, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 31, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	May 31, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	May 31, 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	Jun 01, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	May 31, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	May 31, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	May 31, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 31, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 31, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 31, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 31, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 31, 2022	

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<b>Project Name:</b>	20220531043915-Eurofin-52	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	- ALL SPOIL REPORTS WGTP

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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_20220530_07_49_S_S_Triplicate_EUF	May 30, 2022		Soil	M22-My0073868		X	X	X
2	SX_OB_20220530_07_56_S_S_Primary_EUF	May 30, 2022		Soil	M22-My0073869		X	X	X
3	SX_OB_20220530_12_45_S_S_Primary_EUF	May 30, 2022		Soil	M22-My0073870		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 WGTP 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_20220530_12_56_S_S_Primary_EU_F	May 30, 2022		Soil	M22-My0073871		X	X	X
5	SX_OB_20220530_16_03_S_S_Primary_EU_F	May 30, 2022		Soil	M22-My0073872		X	X	X
6	SX_OB_20220530_16_04_S_S_Duplicate_EUF	May 30, 2022		Soil	M22-My0073873		X	X	X
7	SX_OB_20220530_20_04_S	May 30, 2022		Soil	M22-My0073874		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 WGTP 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								
8	SX_OB_20220 531_00_11_S S_Primary_EU F	May 31, 2022		Soil	M22- My0073875		X	X	X
9	SX_OB_20220 531_04_01_S S_Primary_EU F	May 31, 2022		Soil	M22- My0073876		X	X	X
10	SX_OB_20220 530_07_49_S S_Triplicate_E UF	May 30, 2022		AUS Leachate - pH 5.0	M22- My0073877	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 WGTP 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>									
11	SX_OB_20220530_07_56_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - pH 5.0	M22-My0073878	X		X	
12	SX_OB_20220530_12_45_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - pH 5.0	M22-My0073879	X		X	
13	SX_OB_20220530_12_56_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - pH 5.0	M22-My0073880	X		X	
14	SX_OB_20220530_16_03_S	May 30, 2022		AUS Leachate - pH 5.0	M22-My0073881	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 WGTP 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								
15	SX_OB_20220 530_16_04_S S_Duplicate_E UF	May 30, 2022		AUS Leachate - pH 5.0	M22- My0073882	X		X	
16	SX_OB_20220 530_20_04_S S_Primary_EU F	May 30, 2022		AUS Leachate - pH 5.0	M22- My0073883	X		X	
17	SX_OB_20220 531_00_11_S S_Primary_EU F	May 31, 2022		AUS Leachate - pH 5.0	M22- My0073884	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 WGTP 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>									
18	SX_OB_20220531_04_01_S_S_Primary_EU_F	May 31, 2022		AUS Leachate - pH 5.0	M22-My0073885	X		X	
19	SX_OB_20220530_07_49_S_S_Triplicate_EUF	May 30, 2022		AUS Leachate - Reagent Water	M22-My0073886	X		X	
20	SX_OB_20220530_07_56_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - Reagent Water	M22-My0073887	X		X	
21	SX_OB_20220530_12_45_S	May 30, 2022		AUS Leachate - Reagent	M22-My0073888	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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					
22	SX_OB_20220 530_12_56_S S_Primary_EU F	May 30, 2022		AUS Leachate - Reagent Water	M22- My0073889	X		X	
23	SX_OB_20220 530_16_03_S S_Primary_EU F	May 30, 2022		AUS Leachate - Reagent Water	M22- My0073890	X		X	
24	SX_OB_20220 530_16_04_S S_Duplicate_E UF	May 30, 2022		AUS Leachate - Reagent Water	M22- My0073891	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WGTP 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>									
25	SX_OB_20220530_20_04_S_S_Primary_EU_F	May 30, 2022		AUS Leachate - Reagent Water	M22-My0073892	X		X	
26	SX_OB_20220531_00_11_S_S_Primary_EU_F	May 31, 2022		AUS Leachate - Reagent Water	M22-My0073893	X		X	
27	SX_OB_20220531_04_01_S_S_Primary_EU_F	May 31, 2022		AUS Leachate - Reagent Water	M22-My0073894	X		X	
<b>Test Counts</b>						18	9	27	9

## Internal Quality Control Review and Glossary

### General

1. 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.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. 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

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



**Quality Control Results**

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<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	< 1			1	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	< 5			5	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	%	83		70-130	Pass	
TRH C10-C14	%	118		70-130	Pass	
Naphthalene	%	111		70-130	Pass	
TRH C6-C10	%	121		70-130	Pass	
TRH >C10-C16	%	124		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Volatile Organics</b>						
1.1-Dichloroethene	%	93		70-130	Pass	
1.1.1-Trichloroethane	%	77		70-130	Pass	
1.2-Dichlorobenzene	%	116		70-130	Pass	
1.2-Dichloroethane	%	123		70-130	Pass	
Benzene	%	112		70-130	Pass	
Ethylbenzene	%	94		70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	120			70-130	Pass	
Toluene	%	117			70-130	Pass	
Trichloroethene	%	100			70-130	Pass	
Xylenes - Total*	%	117			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	%	107			70-130	Pass	
Acenaphthylene	%	119			70-130	Pass	
Anthracene	%	97			70-130	Pass	
Benz(a)anthracene	%	106			70-130	Pass	
Benzo(a)pyrene	%	104			70-130	Pass	
Benzo(b&i)fluoranthene	%	94			70-130	Pass	
Benzo(g,h,i)perylene	%	103			70-130	Pass	
Benzo(k)fluoranthene	%	110			70-130	Pass	
Chrysene	%	97			70-130	Pass	
Dibenz(a,h)anthracene	%	106			70-130	Pass	
Fluoranthene	%	109			70-130	Pass	
Fluorene	%	129			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	99			70-130	Pass	
Naphthalene	%	113			70-130	Pass	
Phenanthrene	%	109			70-130	Pass	
Pyrene	%	111			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Organochlorine Pesticides</b>							
Chlordanes - Total	%	80			70-130	Pass	
4,4'-DDD	%	116			70-130	Pass	
4,4'-DDE	%	91			70-130	Pass	
4,4'-DDT	%	109			70-130	Pass	
a-HCH	%	85			70-130	Pass	
Aldrin	%	82			70-130	Pass	
b-HCH	%	90			70-130	Pass	
d-HCH	%	96			70-130	Pass	
Dieldrin	%	84			70-130	Pass	
Endosulfan I	%	81			70-130	Pass	
Endosulfan II	%	79			70-130	Pass	
Endosulfan sulphate	%	84			70-130	Pass	
Endrin	%	86			70-130	Pass	
Endrin aldehyde	%	120			70-130	Pass	
Endrin ketone	%	85			70-130	Pass	
g-HCH (Lindane)	%	109			70-130	Pass	
Heptachlor	%	91			70-130	Pass	
Heptachlor epoxide	%	81			70-130	Pass	
Hexachlorobenzene	%	83			70-130	Pass	
Methoxychlor	%	117			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polychlorinated Biphenyls</b>							
Aroclor-1260	%	97			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Phenols (Halogenated)</b>							
2-Chlorophenol	%	102			25-140	Pass	
2,4-Dichlorophenol	%	108			25-140	Pass	
2,4,5-Trichlorophenol	%	91			25-140	Pass	
2,4,6-Trichlorophenol	%	106			25-140	Pass	
2,6-Dichlorophenol	%	104			25-140	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4-Chloro-3-methylphenol	%	108			25-140	Pass	
Pentachlorophenol	%	96			25-140	Pass	
Tetrachlorophenols - Total	%	108			25-140	Pass	
<b>LCS - % Recovery</b>							
<b>Phenols (non-Halogenated)</b>							
2-Methyl-4,6-dinitrophenol	%	80			25-140	Pass	
2-Nitrophenol	%	102			25-140	Pass	
2,4-Dimethylphenol	%	105			25-140	Pass	
2,4-Dinitrophenol	%	66			25-140	Pass	
2-Methylphenol (o-Cresol)	%	96			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	127			25-140	Pass	
4-Nitrophenol	%	104			25-140	Pass	
Dinoseb	%	92			25-140	Pass	
Phenol	%	103			25-140	Pass	
<b>LCS - % Recovery</b>							
Chromium (hexavalent)	%	91			70-130	Pass	
Cyanide (total)	%	109			70-130	Pass	
Fluoride (Total)	%	93			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Heavy Metals</b>							
Arsenic	%	110			80-120	Pass	
Cadmium	%	115			80-120	Pass	
Chromium	%	115			80-120	Pass	
Copper	%	113			80-120	Pass	
Lead	%	113			80-120	Pass	
Mercury	%	116			80-120	Pass	
Molybdenum	%	109			80-120	Pass	
Nickel	%	112			80-120	Pass	
Selenium	%	115			80-120	Pass	
Silver	%	113			80-120	Pass	
Tin	%	112			80-120	Pass	
Zinc	%	111			80-120	Pass	
<b>LCS - % Recovery</b>							
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>							
Perfluorobutanoic acid (PFBA)	%	122			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	114			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	112			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	114			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	111			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	119			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	113			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	120			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	124			50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	130			50-150	Pass	
Perfluorotetradecanoic acid (PFTTeDA)	%	126			50-150	Pass	
<b>LCS - % Recovery</b>							
<b>Perfluoroalkyl sulfonamido substances</b>							
Perfluorooctane sulfonamide (FOSA)	%	105			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	121			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	117			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	125			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	126			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	120			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	130			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)	%	117			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	117			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	113			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	108			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	117			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	113			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	124			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	128			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)	%	119			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	114			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	139			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	108			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	N22-Jn0001326	NCP	%	85		70-130	Pass	
TRH C10-C14	M22-My0067544	NCP	%	120		70-130	Pass	
Naphthalene	N22-Jn0001326	NCP	%	102		70-130	Pass	
TRH C6-C10	N22-Jn0001326	NCP	%	85		70-130	Pass	
TRH >C10-C16	M22-My0067544	NCP	%	115		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Volatile Organics</b>				Result 1				
1.1-Dichloroethene	N22-Jn0001326	NCP	%	80		70-130	Pass	
1.1.1-Trichloroethane	N22-Jn0001326	NCP	%	75		70-130	Pass	
1.2-Dichlorobenzene	N22-Jn0001326	NCP	%	99		70-130	Pass	
1.2-Dichloroethane	N22-Jn0001326	NCP	%	91		70-130	Pass	
Benzene	N22-Jn0001326	NCP	%	79		70-130	Pass	
Ethylbenzene	N22-Jn0001326	NCP	%	99		70-130	Pass	
m&p-Xylenes	N22-Jn0001326	NCP	%	100		70-130	Pass	
o-Xylene	N22-Jn0001326	NCP	%	103		70-130	Pass	
Toluene	N22-Jn0001326	NCP	%	85		70-130	Pass	
Trichloroethene	N22-Jn0001326	NCP	%	95		70-130	Pass	
Xylenes - Total*	N22-Jn0001326	NCP	%	101		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1				
Acenaphthene	M22-My0071057	NCP	%	91		70-130	Pass	
Acenaphthylene	M22-My0071057	NCP	%	98		70-130	Pass	
Anthracene	M22-My0071057	NCP	%	85		70-130	Pass	
Benz(a)anthracene	M22-My0071057	NCP	%	81		70-130	Pass	
Benzo(a)pyrene	M22-My0071057	NCP	%	86		70-130	Pass	
Benzo(b&j)fluoranthene	M22-My0071057	NCP	%	72		70-130	Pass	
Benzo(g,h,i)perylene	M22-My0071057	NCP	%	89		70-130	Pass	
Benzo(k)fluoranthene	M22-My0071057	NCP	%	90		70-130	Pass	
Chrysene	M22-My0071057	NCP	%	79		70-130	Pass	
Dibenz(a,h)anthracene	M22-My0071057	NCP	%	78		70-130	Pass	
Fluoranthene	M22-My0071057	NCP	%	82		70-130	Pass	
Fluorene	M22-My0071057	NCP	%	103		70-130	Pass	
Indeno(1.2.3-cd)pyrene	M22-My0071057	NCP	%	72		70-130	Pass	
Naphthalene	M22-My0071057	NCP	%	100		70-130	Pass	
Phenanthrene	M22-My0071057	NCP	%	83		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Pyrene	M22-My0071057	NCP	%	84		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Organochlorine Pesticides</b>				Result 1				
Chlordanes - Total	M22-My0071066	NCP	%	83		70-130	Pass	
4.4'-DDD	M22-My0071066	NCP	%	80		70-130	Pass	
4.4'-DDE	M22-My0071066	NCP	%	80		70-130	Pass	
4.4'-DDT	M22-My0071066	NCP	%	84		70-130	Pass	
a-HCH	M22-My0071066	NCP	%	94		70-130	Pass	
Aldrin	M22-My0071066	NCP	%	84		70-130	Pass	
b-HCH	M22-My0071066	NCP	%	76		70-130	Pass	
d-HCH	M22-My0071066	NCP	%	77		70-130	Pass	
Dieldrin	M22-My0071066	NCP	%	87		70-130	Pass	
Endosulfan I	M22-My0071066	NCP	%	92		70-130	Pass	
Endosulfan II	M22-My0071066	NCP	%	71		70-130	Pass	
Endosulfan sulphate	M22-My0071066	NCP	%	87		70-130	Pass	
Endrin	M22-My0071066	NCP	%	93		70-130	Pass	
Endrin aldehyde	M22-My0071066	NCP	%	74		70-130	Pass	
Endrin ketone	M22-My0071066	NCP	%	77		70-130	Pass	
g-HCH (Lindane)	M22-My0071066	NCP	%	95		70-130	Pass	
Heptachlor	M22-My0071066	NCP	%	88		70-130	Pass	
Heptachlor epoxide	M22-My0071066	NCP	%	78		70-130	Pass	
Hexachlorobenzene	M22-My0071066	NCP	%	88		70-130	Pass	
Methoxychlor	M22-My0071066	NCP	%	92		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (Halogenated)</b>				Result 1				
2-Chlorophenol	M22-My0071057	NCP	%	101		30-130	Pass	
2,4-Dichlorophenol	M22-My0071057	NCP	%	108		30-130	Pass	
2,4,5-Trichlorophenol	M22-My0071057	NCP	%	82		30-130	Pass	
2,4,6-Trichlorophenol	M22-My0071057	NCP	%	107		30-130	Pass	
2,6-Dichlorophenol	M22-My0071057	NCP	%	102		30-130	Pass	
4-Chloro-3-methylphenol	M22-My0071057	NCP	%	111		30-130	Pass	
Pentachlorophenol	M22-My0071057	NCP	%	82		30-130	Pass	
Tetrachlorophenols - Total	M22-My0071057	NCP	%	105		30-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (non-Halogenated)</b>				Result 1				
2-Cyclohexyl-4,6-dinitrophenol	M22-My0071057	NCP	%	35		30-130	Pass	
2-Methyl-4,6-dinitrophenol	M22-My0071057	NCP	%	57		30-130	Pass	
2-Nitrophenol	M22-My0071057	NCP	%	97		30-130	Pass	
2,4-Dimethylphenol	M22-My0071057	NCP	%	114		30-130	Pass	
2,4-Dinitrophenol	M22-My0071057	NCP	%	40		30-130	Pass	
2-Methylphenol (o-Cresol)	M22-My0071057	NCP	%	98		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-My0071057	NCP	%	103		30-130	Pass	
4-Nitrophenol	M22-My0071057	NCP	%	88		30-130	Pass	
Dinoseb	M22-My0071057	NCP	%	76		30-130	Pass	
Phenol	M22-My0071057	NCP	%	109		30-130	Pass	
<b>Spike - % Recovery</b>								
				Result 1				
Cyanide (total)	M22-My0073818	NCP	%	89		70-130	Pass	
Fluoride (Total)	M22-My0075894	NCP	%	99		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Arsenic	M22-My0075534	NCP	%	99		75-125	Pass	
Cadmium	M22-My0075534	NCP	%	113		75-125	Pass	
Chromium	M22-My0075534	NCP	%	103		75-125	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Copper	M22-My0075534	NCP	%	105		75-125	Pass	
Lead	M22-My0075700	NCP	%	118		75-125	Pass	
Mercury	M22-My0075534	NCP	%	123		75-125	Pass	
Molybdenum	M22-My0075534	NCP	%	112		75-125	Pass	
Nickel	M22-My0075534	NCP	%	105		75-125	Pass	
Selenium	M22-My0075534	NCP	%	102		75-125	Pass	
Silver	M22-My0075534	NCP	%	113		75-125	Pass	
Tin	M22-My0075700	NCP	%	115		75-125	Pass	
Zinc	M22-My0075534	NCP	%	120		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1				
Perfluorobutanoic acid (PFBA)	M22-My0075245	NCP	%	116		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-My0075245	NCP	%	111		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-My0075245	NCP	%	113		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-My0075245	NCP	%	118		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-My0075245	NCP	%	108		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-My0075245	NCP	%	115		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-My0075245	NCP	%	113		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-My0075245	NCP	%	106		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-My0075245	NCP	%	116		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-My0075245	NCP	%	118		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-My0075245	NCP	%	122		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1				
Perfluorooctane sulfonamide (FOSA)	M22-My0075245	NCP	%	104		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0075245	NCP	%	116		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0075245	NCP	%	115		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0075245	NCP	%	115		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0075245	NCP	%	117		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-My0075245	NCP	%	118		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0075245	NCP	%	117		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>				Result 1				
Perfluorobutanesulfonic acid (PFBS)	M22-My0075245	NCP	%	107		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-My0075245	NCP	%	113		50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-My0075245	NCP	%	107		50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-My0075245	NCP	%	109		50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-My0075245	NCP	%	111		50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0075245	NCP	%	75		50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-My0075245	NCP	%	110		50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-My0075245	NCP	%	119		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<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-My0075245	NCP	%	131			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0075245	NCP	%	101			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0075245	NCP	%	148			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0075245	NCP	%	100			50-150	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 C10-C14	M22-My0068475	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M22-My0068475	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M22-My0068475	NCP	mg/kg	50	50	1.0	30%	Pass	
TRH >C10-C16	M22-My0068475	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M22-My0068475	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M22-My0068475	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
<b>Duplicate</b>									
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1	Result 2	RPD			
Acenaphthene	M22-My0068884	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M22-My0068884	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M22-My0068884	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M22-My0068884	NCP	mg/kg	0.6	< 0.5	28	30%	Pass	
Benzo(a)pyrene	M22-My0068884	NCP	mg/kg	1.0	0.7	33	30%	Fail	Q15
Benzo(b&j)fluoranthene	M22-My0068884	NCP	mg/kg	0.6	0.5	9.0	30%	Pass	
Benzo(g,h,i)perylene	M22-My0068884	NCP	mg/kg	0.8	0.5	39	30%	Fail	Q15
Benzo(k)fluoranthene	M22-My0068884	NCP	mg/kg	0.8	0.6	29	30%	Pass	
Chrysene	M22-My0068884	NCP	mg/kg	0.7	0.5	30	30%	Pass	
Dibenz(a,h)anthracene	M22-My0068884	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M22-My0068884	NCP	mg/kg	0.8	0.6	22	30%	Pass	
Fluorene	M22-My0068884	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	M22-My0068884	NCP	mg/kg	0.6	< 0.5	36	30%	Fail	Q15
Naphthalene	M22-My0068884	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M22-My0068884	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M22-My0068884	NCP	mg/kg	1.0	0.7	29	30%	Pass	
<b>Duplicate</b>									
<b>Organochlorine Pesticides</b>				Result 1	Result 2	RPD			
Chlordanes - Total	M22-My0068884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4,4'-DDD	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDE	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDT	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate								
<b>Organochlorine Pesticides</b>				Result 1	Result 2	RPD		
Endrin aldehyde	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-My0068884	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-My0068884	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
<b>Polychlorinated Biphenyls</b>				Result 1	Result 2	RPD		
Aroclor-1016	M22-My0068884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-My0068884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-My0068884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-My0068884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-My0068884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-My0068884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-My0068884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-My0068884	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
<b>Phenols (Halogenated)</b>				Result 1	Result 2	RPD		
2-Chlorophenol	M22-My0068884	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M22-My0068884	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M22-My0068884	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M22-My0068884	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	M22-My0068884	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-My0068884	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-My0068884	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-My0068884	NCP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
<b>Phenols (non-Halogenated)</b>				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	M22-My0068884	NCP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M22-My0068884	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-My0068884	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M22-My0068884	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	M22-My0068884	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-My0068884	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-My0068884	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M22-My0068884	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-My0068884	NCP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-My0068884	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Cyanide (total)	M22-My0075558	NCP	mg/kg	< 5	< 5	<1	30%	Pass
pH (1:5 Aqueous extract at 25°C as rec.)	M22-My0075463	NCP	pH Units	6.3	6.4	pass	30%	Pass
% Moisture	M22-My0073810	NCP	%	15	14	7.0	30%	Pass
Duplicate								
<b>Heavy Metals</b>				Result 1	Result 2	RPD		
Arsenic	M22-My0075534	NCP	mg/kg	7.6	7.6	<1	30%	Pass
Cadmium	M22-My0075534	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M22-My0075534	NCP	mg/kg	39	40	2.0	30%	Pass
Copper	M22-My0075534	NCP	mg/kg	35	36	4.0	30%	Pass
Lead	M22-My0075534	NCP	mg/kg	96	98	2.0	30%	Pass
Mercury	M22-My0075534	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Molybdenum	M22-My0075534	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M22-My0075534	NCP	mg/kg	36	38	5.0	30%	Pass
Selenium	M22-My0075534	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M22-My0075534	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-My0075534	NCP	mg/kg	140	140	3.0	30%	Pass
Zinc	M22-My0075534	NCP	mg/kg	99	100	4.0	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-My0075242	NCP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0075242	NCP	ug/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-My0075242	NCP	ug/kg	< 5	< 5	<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-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0075242	NCP	ug/kg	< 10	< 10	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0075242	NCP	ug/kg	< 5	< 5	<1	30%	Pass
<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Fluoride (Total)	M22-My0073869	CP	mg/kg	120	150	19	30%	Pass
<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-My0073872	CP	mg/kg	< 1	< 1	<1	30%	Pass
<b>Duplicate</b>								
<b>Total Recoverable Hydrocarbons</b>				Result 1	Result 2	RPD		
TRH C6-C9	M22-My0073874	CP	mg/kg	< 20	< 20	<1	30%	Pass
Naphthalene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	M22-My0073874	CP	mg/kg	< 20	< 20	<1	30%	Pass
<b>Duplicate</b>								
<b>Volatile Organics</b>				Result 1	Result 2	RPD		
Hexachlorobutadiene	M22-My0073874	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-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trichlorobenzene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1-Dichloroethene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1-Trichloroethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1.2-Tetrachloroethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2-Trichloroethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2.2-Tetrachloroethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dibromoethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichlorobenzene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloroethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloropropane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.3-Trichloropropane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trimethylbenzene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichlorobenzene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichloropropane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3.5-Trimethylbenzene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.4-Dichlorobenzene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzene	M22-My0073874	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Bromobenzene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

<b>Duplicate</b>								
<b>Volatile Organics</b>				Result 1	Result 2	RPD		
Carbon Tetrachloride	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	M22-My0073874	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	M22-My0073874	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	M22-My0073874	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	M22-My0073874	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1.2-Dichloroethene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.3-Dichloropropene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-My0073874	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total*	M22-My0073874	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Fluoride (Total)	M22-My0073874	CP	mg/kg	< 100	< 100	<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
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).
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

### Authorised by:

Catherine Wilson	Analytical Services Manager
Joseph Edouard	Senior Analyst-PFAS
Caitlin Breeze	Senior Analyst-Inorganic
Mary Makarios	Senior Analyst-Metal
Linda Chourman	Senior Analyst-Sample Properties
Joseph Edouard	Senior Analyst-Organic
Edward Lee	Senior Analyst-Organic
Vivian Wang	Senior Analyst-Volatile
Emily Rosenberg	Senior Analyst-Metal
Scott Beddoes	Senior Analyst-Inorganic
Carroll Lee	Senior Analyst-Volatile



**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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Company		AGON Environmental - Tunnel Spoil Testing		Project No	JC0927					Project Manager	Craig Trimbur			Sampler(s)	TG+WOH-AGON					
Address		Unit H76, 63-85 Turner St, Port Melbourne VIC 3207		Project Name	WGTP-Tunnel Ref: 20220601044422-Eurofin-8					EDD Format	ESdat, EQUIS etc			Esdat	Handed over by					
Contact Name		Craig Trimbur David Lawson		Analyses <small>Where metals are regulated, please specify 'Total' or 'Filtered' SULFIDE could not be used for all suite Sulfide group</small>	Spoil Sample Preparation	Suite WGTP-RX-TRH/PAH/Phenols/OCPI/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 - 5ug/kg	ASLP PH 5 - PFAS 0.01-0.05 ug/l	ASLP Reagent - PFAS 0.01-0.05ug/l											
Phone No		+61 400 826 907 (Craig) +61 490 411 004 (David)															Email for Invoice		finance@agonenviro.com.au LabReports.TST@agonenviro.com.au	
Special Directions		Please provide an interim lab report if finalised report has not been provided by 14 days from sample receipt. Please provide eSRN along with oter sample receipt documentation.															Email for Results		LabReports.TST@agonenviro.com.au agonenvironmental@esdat.com.au motherhublabresults1@wgtp.com.au Amrit.Kaur@agile-analytics.com.au	
Purchase Order																	Containers <small>Change container type &amp; size if necessary</small>		Required Turnaround Time (TAT) <small>Default will be 5 days if not ticked</small>	
Quote ID No		Agon WGTP TST		500mL Plastic		250mL Plastic		125mL Plastic		200mL Amber Glass		40mL VOA vial		500mL PFAS Bottle		Jar (Glass or HDPE)		Other (Asbestos AS4684, WA Guidelines)		
No	Client Sample ID	Sampled Date/Time <small>dd/mm/yyyy hh:mm</small>	Matrix <small>Solid (S) Water (W)</small>																	
1	SX_OB_20220531_08_16_SS_Triplicate_EUF	31.05.22 08:16	S	X	X	X	X	X												
2	SX_OB_20220531_08_21_SS_Primary_EUF	31.05.22 08:21	S	X	X	X	X	X												
3	SX_OB_20220531_12_04_SS_Primary_EUF	31.05.22 12:04	S	X	X	X	X	X												
4	SX_OB_20220531_16_07_SS_Primary_EUF	31.05.22 16:07	S	X	X	X	X	X												
5	SX_OB_20220531_16_08_SS_Duplicate_EUF	31.05.22 16:08	S	X	X	X	X	X												
6	SX_IB_20220531_20_32_SS_Primary_EUF	31.05.22 20:32	S	X	X	X	X	X												
7	SX_IB_20220531_23_45_SS_Primary_EUF	31.05.22 23:45	S	X	X	X	X	X												
8	SX_IB_20220601_03_55_SS_Primary_EUF	31.05.22 03:55	S	X	X	X	X	X												
9	SX_IB_20220601_04_33_SB_Blank_EUF	31.05.22 04:33	W			X														
10	SX_IB_20220601_04_34_SR_Rinsate_EUF	31.05.22 04:34	W			X														
Total Counts				8	8	10	8	8												
Method of Shipment		<input checked="" type="checkbox"/> Courier ( )		<input type="checkbox"/> Hand Delivered		<input type="checkbox"/> Postal		Name	WOLZ		Signature	WOLZ		Date	1/6		Time	AM		
Laboratory Use Only		Received By	Tabris		SYD   BNE   MEL   PER   ADL   NTL   DRW	Signature	Tm		Date	1/6		Time	12:15		Temperature	10.6				
Laboratory Use Only		Received By			SYD   BNE   MEL   PER   ADL   NTL   DRW	Signature			Date			Time			Report No	893567				

Jake



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



NATA Accredited  
Accreditation Number 1261  
Site Number 1254

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

Attention: **David Lawson**

Report **893567-L**  
Project name **20220601044422-Eurofin-8**  
Project ID **JC0927**  
Received Date **Jun 01, 2022**

Client Sample ID			SX_OB_20220 531_08_16_S S_Triplicate_E UF	SX_OB_20220 531_08_21_S S_Primary_EU F	SX_OB_20220 531_12_04_SS _Primary_EUF	SX_OB_20220 531_16_07_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- Jn0000715	M22- Jn0000716	M22- Jn0000717	M22- Jn0000718
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	May 31, 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	5.1	5.3	5.3	5.3
<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 (PFTTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	74	79	65	77
13C5-PFPeA (surr.)	1	%	71	74	64	81
13C5-PFHxA (surr.)	1	%	61	61	72	123
13C4-PFHpA (surr.)	1	%	72	74	66	81
13C8-PFOA (surr.)	1	%	115	120	103	122
13C5-PFNA (surr.)	1	%	93	100	88	97
13C6-PFDA (surr.)	1	%	83	87	67	70
13C2-PFUnDA (surr.)	1	%	71	71	52	58
13C2-PFDoDA (surr.)	1	%	69	70	50	59
13C2-PFTTeDA (surr.)	1	%	61	70	46	68

Client Sample ID			SX_OB_20220 531_08_16_S S_Triplicate_E UF	SX_OB_20220 531_08_21_S S_Primary_EU F	SX_OB_20220 531_12_04_SS _Primary_EUF	SX_OB_20220 531_16_07_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- Jn0000715	M22- Jn0000716	M22- Jn0000717	M22- Jn0000718
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	May 31, 2022
Test/Reference	LOR	Unit				
<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	%	38	24	32	99
D3-N-MeFOSA (surr.)	1	%	23	25	24	27
D5-N-EtFOSA (surr.)	1	%	26	31	10	34
D7-N-MeFOSE (surr.)	1	%	11	62	20	40
D9-N-EtFOSE (surr.)	1	%	83	80	64	53
D5-N-EtFOSAA (surr.)	1	%	107	123	64	95
D3-N-MeFOSAA (surr.)	1	%	83	81	45	54
<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	%	76	81	85	92
18O2-PFHxS (surr.)	1	%	86	89	86	88
13C8-PFOS (surr.)	1	%	85	94	83	79
<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	%	110	123	124	82
13C2-6:2 FTSA (surr.)	1	%	69	66	74	93
13C2-8:2 FTSA (surr.)	1	%	88	93	67	63
13C2-10:2 FTSA (surr.)	1	%	74	66	62	56
<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 531_16_08_SS Duplicate_EU F	SX_IB_202205 31_20_32_SS Primary_EUF	SX_IB_202205 31_23_45_SS Primary_EUF	SX_IB_202206 01_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- Jn0000719	M22- Jn0000720	M22- Jn0000721	M22- Jn0000722
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	Jun 01, 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	5.3	5.0	5.0	4.9
<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
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 (PFTTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	68	80	70	79
13C5-PFPeA (surr.)	1	%	61	57	125	75
13C5-PFHxA (surr.)	1	%	91	107	103	108
13C4-PFHpA (surr.)	1	%	76	51	71	60
13C8-PFOA (surr.)	1	%	107	119	100	119
13C5-PFNA (surr.)	1	%	74	109	91	100
13C6-PFDA (surr.)	1	%	60	107	142	97
13C2-PFUnDA (surr.)	1	%	40	92	98	84
13C2-PFDoDA (surr.)	1	%	31	79	88	79
13C2-PFTTeDA (surr.)	1	%	10	100	59	92
<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	%	71	65	20	47
D3-N-MeFOSA (surr.)	1	%	21	30	35	26
D5-N-EtFOSA (surr.)	1	%	47	50	30	21
D7-N-MeFOSE (surr.)	1	%	67	17	15	15
D9-N-EtFOSE (surr.)	1	%	10	21	19	15
D5-N-EtFOSAA (surr.)	1	%	66	78	94	141
D3-N-MeFOSAA (surr.)	1	%	43	109	106	97

Client Sample ID			SX_OB_20220 531_16_08_SS Duplicate_EU F	SX_IB_202205 31_20_32_SS Primary_EUF	SX_IB_202205 31_23_45_SS Primary_EUF	SX_IB_202206 01_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- Jn0000719	M22- Jn0000720	M22- Jn0000721	M22- Jn0000722
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	Jun 01, 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	%	79	81	127	91
18O2-PFHxS (surr.)	1	%	73	95	97	91
13C8-PFOS (surr.)	1	%	64	95	80	100
<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	%	74	101	157	110
13C2-6:2 FTSA (surr.)	1	%	79	77	168	73
13C2-8:2 FTSA (surr.)	1	%	50	88	73	82
13C2-10:2 FTSA (surr.)	1	%	33	114	60	98
<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 531_08_16_S S_Triplicate_E UF	SX_OB_20220 531_08_21_S S_Primary_EU F	SX_OB_20220 531_12_04_SS _Primary_EUF	SX_OB_20220 531_16_07_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- Jn0000723	M22- Jn0000724	M22- Jn0000725	M22- Jn0000726
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	May 31, 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	6.0	6.0	6.0	6.0
pH (off)	0.1	pH Units	6.4	6.6	7.2	7.2

Client Sample ID			SX_OB_20220 531_08_16_S S_Triplicate_E UF	SX_OB_20220 531_08_21_S S_Primary_EU F	SX_OB_20220 531_12_04_SS _Primary_EUF	SX_OB_20220 531_16_07_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- Jn0000723	M22- Jn0000724	M22- Jn0000725	M22- Jn0000726
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	May 31, 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	%	70	72	81	72
13C5-PFPeA (surr.)	1	%	77	131	99	79
13C5-PFHxA (surr.)	1	%	57	89	134	104
13C4-PFHpA (surr.)	1	%	71	82	98	79
13C8-PFOA (surr.)	1	%	120	115	148	117
13C5-PFNA (surr.)	1	%	95	101	116	98
13C6-PFDA (surr.)	1	%	79	112	119	100
13C2-PFUnDA (surr.)	1	%	65	96	118	81
13C2-PFDoDA (surr.)	1	%	67	90	109	63
13C2-PFTeDA (surr.)	1	%	74	45	100	37
<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	%	22	37	136	24
D3-N-MeFOSA (surr.)	1	%	23	53	102	21
D5-N-EtFOSA (surr.)	1	%	13	31	123	74
D7-N-MeFOSE (surr.)	1	%	39	90	90	48
D9-N-EtFOSE (surr.)	1	%	49	10	85	51
D5-N-EtFOSAA (surr.)	1	%	114	107	99	125
D3-N-MeFOSAA (surr.)	1	%	79	122	142	86
<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

<b>Client Sample ID</b>			<b>SX_OB_20220 531_08_16_S S_Triplicate_E UF</b>	<b>SX_OB_20220 531_08_21_S S_Primary_EU F</b>	<b>SX_OB_20220 531_12_04_SS _Primary_EUF</b>	<b>SX_OB_20220 531_16_07_SS _Primary_EUF</b>
<b>Sample Matrix</b>			<b>AUS Leachate - Reagent Water</b>	<b>AUS Leachate - Reagent Water</b>	<b>AUS Leachate - Reagent Water</b>	<b>AUS Leachate - Reagent Water</b>
<b>Eurofins Sample No.</b>			<b>M22- Jn0000723</b>	<b>M22- Jn0000724</b>	<b>M22- Jn0000725</b>	<b>M22- Jn0000726</b>
<b>Date Sampled</b>			<b>May 31, 2022</b>	<b>May 31, 2022</b>	<b>May 31, 2022</b>	<b>May 31, 2022</b>
<b>Test/Reference</b>	LOR	Unit				
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
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	%	86	142	102	85
18O2-PFHxS (surr.)	1	%	87	88	104	82
13C8-PFOS (surr.)	1	%	89	79	111	82
<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	%	110	157	62	64
13C2-6:2 FTSA (surr.)	1	%	66	88	101	65
13C2-8:2 FTSA (surr.)	1	%	79	92	119	78
13C2-10:2 FTSA (surr.)	1	%	65	23	145	75
<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

<b>Client Sample ID</b>			<b>SX_OB_20220 531_16_08_SS _Duplicate_EU F</b>	<b>SX_IB_202205 31_20_32_SS _Primary_EUF</b>	<b>SX_IB_202205 31_23_45_SS _Primary_EUF</b>	<b>SX_IB_202206 01_03_55_SS _Primary_EUF</b>
<b>Sample Matrix</b>			<b>AUS Leachate - Reagent Water</b>	<b>AUS Leachate - Reagent Water</b>	<b>AUS Leachate - Reagent Water</b>	<b>AUS Leachate - Reagent Water</b>
<b>Eurofins Sample No.</b>			<b>M22- Jn0000727</b>	<b>M22- Jn0000728</b>	<b>M22- Jn0000729</b>	<b>M22- Jn0000730</b>
<b>Date Sampled</b>			<b>May 31, 2022</b>	<b>May 31, 2022</b>	<b>May 31, 2022</b>	<b>Jun 01, 2022</b>
<b>Test/Reference</b>	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	6.0	6.0	6.0	6.0
pH (off)	0.1	pH Units	8.7	8.7	9.3	8.9
<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

Client Sample ID			SX_OB_20220 531_16_08_SS Duplicate_EU F	SX_IB_202205 31_20_32_SS Primary_EUF	SX_IB_202205 31_23_45_SS Primary_EUF	SX_IB_202206 01_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- Jn0000727	M22- Jn0000728	M22- Jn0000729	M22- Jn0000730
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	Jun 01, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
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	%	74	66	82	84
13C5-PFPeA (surr.)	1	%	69	69	97	117
13C5-PFHxA (surr.)	1	%	101	82	123	116
13C4-PFHpA (surr.)	1	%	121	109	94	96
13C8-PFOA (surr.)	1	%	75	80	139	140
13C5-PFNA (surr.)	1	%	116	103	123	123
13C6-PFDA (surr.)	1	%	130	121	148	120
13C2-PFUnDA (surr.)	1	%	152	141	124	122
13C2-PFDoDA (surr.)	1	%	107	100	108	102
13C2-PFTeDA (surr.)	1	%	143	113	101	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	0.07	< 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	%	76	64	135	141
D3-N-MeFOSA (surr.)	1	%	24	76	104	98
D5-N-EtFOSA (surr.)	1	%	24	100	120	104
D7-N-MeFOSE (surr.)	1	%	21	25	69	78
D9-N-EtFOSE (surr.)	1	%	26	36	71	73
D5-N-EtFOSAA (surr.)	1	%	109	104	93	106
D3-N-MeFOSAA (surr.)	1	%	112	90	80	90
<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	%	108	92	102	105
18O2-PFHxS (surr.)	1	%	107	89	100	103
13C8-PFOS (surr.)	1	%	78	89	108	114

Client Sample ID			SX_OB_20220 531_16_08_SS Duplicate_EU F	SX_IB_202205 31_20_32_SS Primary_EUF	SX_IB_202205 31_23_45_SS Primary_EUF	SX_IB_202206 01_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- Jn0000727	M22- Jn0000728	M22- Jn0000729	M22- Jn0000730
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	Jun 01, 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	%	100	140	129	112
13C2-6:2 FTSA (surr.)	1	%	106	144	125	121
13C2-8:2 FTSA (surr.)	1	%	89	101	125	131
13C2-10:2 FTSA (surr.)	1	%	139	116	125	142
<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.

<b>Description</b>	<b>Testing Site</b>	<b>Extracted</b>	<b>Holding Time</b>
AUS Leaching Procedure			
pH (initial) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Jun 01, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Jun 01, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Jun 01, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 01, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 01, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 01, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 01, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 01, 2022	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Jun 1, 2022 12:15 PM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	893567	<b>Due:</b>	Jun 8, 2022
<b>Project Name:</b>	20220601044422-Eurofin-8	<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_20220531_08_16_SS_Triplicate_EUF	May 31, 2022	8:16AM	Soil	M22-Jn0000705		X	X	X
2	SX_OB_20220531_08_21_SS_Primary_EUF	May 31, 2022	8:21AM	Soil	M22-Jn0000706		X	X	X
3	SX_OB_20220531_12_04_SS_Primary_EUF	May 31, 2022	12:04PM	Soil	M22-Jn0000707		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_20220531_16_07_SS_Primary_EUF	May 31, 2022	4:07PM	Soil	M22-Jn0000708		X	X	X
5	SX_OB_20220531_16_08_SS_Duplicate_EUF	May 31, 2022	4:08PM	Soil	M22-Jn0000709		X	X	X
6	SX_IB_20220531_20_32_SS_Primary_EUF	May 31, 2022	8:32PM	Soil	M22-Jn0000710		X	X	X
7	SX_IB_20220531_23_45_SS_Primary_EUF	May 31, 2022	11:45PM	Soil	M22-Jn0000711		X	X	X

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Jun 1, 2022 12:15 PM
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<b>Project Name:</b>	20220601044422-Eurofin-8	<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_IB_20220601_03_55_SS_Primary_EUF	Jun 01, 2022	3:55AM	Soil	M22-Jn0000712		X	X	X
9	SX_IB_20220601_04_33_SB_Blank_EUF	Jun 01, 2022	4:33AM	Water	M22-Jn0000713			X	
10	SX_IB_20220601_04_34_SR_Rinsate_EUF	Jun 01, 2022	4:34AM	Water	M22-Jn0000714			X	
11	SX_OB_20220531_08_16_SS_Triplicate_EUF	May 31, 2022	8:16AM	AUS Leachate - pH 5.0	M22-Jn0000715	X		X	
12	SX_OB_20220531_08_21AM	May 31, 2022	8:21AM	AUS Leachate	M22-	X		X	

**Company Name:** Agon Environmental Pty Ltd - VIC  
**Address:** 3/224 Glen Osmond Road  
Fullarton  
SA 5063  
**Project Name:** 20220601044422-Eurofin-8  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 893567  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Jun 1, 2022 12:15 PM  
**Due:** Jun 8, 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>									
	531_08_21__SS_Primary_EUF			- pH 5.0	Jn0000716				
13	SX_OB_20220531_12_04_SS_Primary_EUF	May 31, 2022	12:04PM	AUS Leachate - pH 5.0	M22-Jn0000717	X		X	
14	SX_OB_20220531_16_07_SS_Primary_EUF	May 31, 2022	4:07PM	AUS Leachate - pH 5.0	M22-Jn0000718	X		X	
15	SX_OB_20220531_16_08_SS_Duplicate_EUF	May 31, 2022	4:08PM	AUS Leachate - pH 5.0	M22-Jn0000719	X		X	

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<b>Project Name:</b>	20220601044422-Eurofin-8	<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>									
	UF								
16	SX_IB_20220531_20_32_SS_Primary_EUF	May 31, 2022	8:32PM	AUS Leachate - pH 5.0	M22-Jn0000720	X		X	
17	SX_IB_20220531_23_45_SS_Primary_EUF	May 31, 2022	11:45PM	AUS Leachate - pH 5.0	M22-Jn0000721	X		X	
18	SX_IB_20220601_03_55_SS_Primary_EUF	Jun 01, 2022	3:55AM	AUS Leachate - pH 5.0	M22-Jn0000722	X		X	
19	SX_OB_20220531_08_16_SS_Triplicate_EUF	May 31, 2022	8:16AM	AUS Leachate - Reagent Water	M22-Jn0000723	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Jun 1, 2022 12:15 PM
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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>									
20	SX_OB_20220531_08_21_SS_Primary_EUF	May 31, 2022	8:21AM	AUS Leachate - Reagent Water	M22-Jn0000724	X		X	
21	SX_OB_20220531_12_04_SS_Primary_EUF	May 31, 2022	12:04PM	AUS Leachate - Reagent Water	M22-Jn0000725	X		X	
22	SX_OB_20220531_16_07_SS_Primary_EUF	May 31, 2022	4:07PM	AUS Leachate - Reagent Water	M22-Jn0000726	X		X	
23	SX_OB_20220531_16_08_S	May 31, 2022	4:08PM	AUS Leachate - Reagent	M22-Jn0000727	X		X	

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<b>Project Name:</b>	20220601044422-Eurofin-8	<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 (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_Duplicate_EUF			Water					
24	SX_IB_20220531_20_32_SS_Primary_EUF	May 31, 2022	8:32PM	AUS Leachate - Reagent Water	M22-Jn0000728	X		X	
25	SX_IB_20220531_23_45_SS_Primary_EUF	May 31, 2022	11:45PM	AUS Leachate - Reagent Water	M22-Jn0000729	X		X	
26	SX_IB_20220601_03_55_SS_Primary_EUF	Jun 01, 2022	3:55AM	AUS Leachate - Reagent Water	M22-Jn0000730	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)	%	86		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	122		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	88		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	83		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	84		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	85		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	99		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	95		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	97		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	70		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	115		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)	%	86			50-150	Pass			
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	80			50-150	Pass			
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	144			50-150	Pass			
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	66			50-150	Pass			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	142			50-150	Pass			
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	94			50-150	Pass			
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	104			50-150	Pass			
<b>LCS - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>									
Perfluorobutanesulfonic acid (PFBS)	%	75			50-150	Pass			
Perfluorononanesulfonic acid (PFNS)	%	62			50-150	Pass			
Perfluoropropanesulfonic acid (PFPrS)	%	91			50-150	Pass			
Perfluoropentanesulfonic acid (PFPeS)	%	78			50-150	Pass			
Perfluorohexanesulfonic acid (PFHxS)	%	81			50-150	Pass			
Perfluoroheptanesulfonic acid (PFHpS)	%	119			50-150	Pass			
Perfluorooctanesulfonic acid (PFOS)	%	103			50-150	Pass			
Perfluorodecanesulfonic acid (PFDS)	%	115			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)	%	138			50-150	Pass			
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	136			50-150	Pass			
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	86			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-Jn0006495	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Jn0006495	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-Jn0006495	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Jn0006495	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Jn0006495	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Jn0006495	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Jn0006495	NCP	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-Jn0006495	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Jn0006495	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
<b>Duplicate</b>								
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Jn0006495	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-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Jn0006495	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Jn0006495	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Jn0006495	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
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



**Glenn Jackson**  
**General Manager**

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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



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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 **893567-S**  
Project name **20220601044422-Eurofin-8**  
Project ID **JC0927**  
Received Date **Jun 01, 2022**

Client Sample ID			SX_OB_20220 531_08_16_S S_Triplicate_E UF	SX_OB_20220 531_08_21_S S_Primary_EU F	SX_OB_20220 531_12_04_SS _Primary_EUF	SX_OB_20220 531_16_07_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0000705	M22- Jn0000706	M22- Jn0000707	M22- Jn0000708
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	May 31, 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

Client Sample ID			SX_OB_20220 531_08_16_S S_Triplicate_E UF	SX_OB_20220 531_08_21_S S_Primary_EU F	SX_OB_20220 531_12_04_SS _Primary_EUF	SX_OB_20220 531_16_07_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0000705	M22- Jn0000706	M22- Jn0000707	M22- Jn0000708
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	May 31, 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	%	107	61	77	121
Toluene-d8 (surr.)	1	%	105	57	71	100
<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

Client Sample ID			SX_OB_20220 531_08_16_S S_Triplicate_E UF	SX_OB_20220 531_08_21_S S_Primary_EU F	SX_OB_20220 531_12_04_SS _Primary_EUF	SX_OB_20220 531_16_07_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0000705	M22- Jn0000706	M22- Jn0000707	M22- Jn0000708
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	May 31, 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
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	%	85	101	150	122
p-Terphenyl-d14 (surr.)	1	%	73	91	139	103
<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	%	53	89	52	61
Tetrachloro-m-xylene (surr.)	1	%	78	108	137	126



Client Sample ID			SX_OB_20220 531_08_16_S S_Triplicate_E UF	SX_OB_20220 531_08_21_S S_Primary_EU F	SX_OB_20220 531_12_04_SS _Primary_EUF	SX_OB_20220 531_16_07_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0000705	M22- Jn0000706	M22- Jn0000707	M22- Jn0000708
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	May 31, 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	%	53	89	52	61
Tetrachloro-m-xylene (surr.)	1	%	78	108	137	126
<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	%	90	38	54	51
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	6.5	6.6	6.7	7.1
<b>% Moisture</b>						
% Moisture	1	%	31	32	29	27
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	95	66	83	47
Cadmium	1	mg/kg	< 1	< 1	< 1	< 1
Chromium	5	mg/kg	140	130	130	120
Copper	5	mg/kg	34	36	37	56
Lead	5	mg/kg	11	9.2	17	6.3
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_OB_20220 531_08_16_S S_Triplicate_E UF	SX_OB_20220 531_08_21_S S_Primary_EU F	SX_OB_20220 531_12_04_SS _Primary_EUF	SX_OB_20220 531_16_07_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0000705	M22- Jn0000706	M22- Jn0000707	M22- Jn0000708
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	May 31, 2022
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	70	62	77	150
Selenium	5	mg/kg	< 5	< 5	< 5	< 5
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	43	40	51	98
<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	%	93	100	110	110
13C5-PFPeA (surr.)	1	%	91	100	108	113
13C5-PFHxA (surr.)	1	%	83	96	108	108
13C4-PFHpA (surr.)	1	%	86	96	113	119
13C8-PFOA (surr.)	1	%	94	105	119	119
13C5-PFNA (surr.)	1	%	72	81	99	101
13C6-PFDA (surr.)	1	%	85	102	113	125
13C2-PFUnDA (surr.)	1	%	73	86	103	114
13C2-PFDoDA (surr.)	1	%	77	97	104	121
13C2-PFTeDA (surr.)	1	%	58	63	92	94
<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	%	80	98	112	117
D3-N-MeFOSA (surr.)	1	%	79	89	110	123
D5-N-EtFOSA (surr.)	1	%	78	92	109	119
D7-N-MeFOSE (surr.)	1	%	83	99	120	121
D9-N-EtFOSE (surr.)	1	%	79	97	116	122
D5-N-EtFOSAA (surr.)	1	%	84	93	114	119
D3-N-MeFOSAA (surr.)	1	%	80	94	118	127

Client Sample ID			SX_OB_20220 531_08_16_S S_Triplicate_E UF	SX_OB_20220 531_08_21_S S_Primary_EU F	SX_OB_20220 531_12_04_SS _Primary_EUF	SX_OB_20220 531_16_07_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0000705	M22- Jn0000706	M22- Jn0000707	M22- Jn0000708
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	May 31, 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	%	96	97	109	109
18O2-PFHxS (surr.)	1	%	88	98	110	112
13C8-PFOS (surr.)	1	%	83	100	111	116
<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	%	74	85	89	90
13C2-6:2 FTSA (surr.)	1	%	91	89	103	102
13C2-8:2 FTSA (surr.)	1	%	81	87	102	110
13C2-10:2 FTSA (surr.)	1	%	78	86	112	120
<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 531_16_08_SS _Duplicate_EU F	SX_IB_202205 31_20_32_SS _Primary_EUF	SX_IB_202205 31_23_45_SS _Primary_EUF	SX_IB_202206 01_03_55_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0000709	M22- Jn0000710	M22- Jn0000711	M22- Jn0000712
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	Jun 01, 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

Client Sample ID			SX_OB_20220 531_16_08_SS Duplicate_EU F	SX_IB_202205 31_20_32_SS Primary_EUF	SX_IB_202205 31_23_45_SS Primary_EUF	SX_IB_202206 01_03_55_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0000709	M22- Jn0000710	M22- Jn0000711	M22- Jn0000712
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	Jun 01, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
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
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

Client Sample ID			SX_OB_20220 531_16_08_SS Duplicate_EU F	SX_IB_202205 31_20_32_SS Primary_EUF	SX_IB_202205 31_23_45_SS Primary_EUF	SX_IB_202206 01_03_55_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0000709	M22- Jn0000710	M22- Jn0000711	M22- Jn0000712
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	Jun 01, 2022
Test/Reference	LOR	Unit				
<b>Volatile Organics</b>						
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	%	87	75	76	85
Toluene-d8 (surr.)	1	%	78	74	70	80
<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	148	68	67
p-Terphenyl-d14 (surr.)	1	%	65	134	63	61

Client Sample ID			SX_OB_20220 531_16_08_SS Duplicate_EU F	SX_IB_202205 31_20_32_SS Primary_EUF	SX_IB_202205 31_23_45_SS Primary_EUF	SX_IB_202206 01_03_55_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0000709	M22- Jn0000710	M22- Jn0000711	M22- Jn0000712
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	Jun 01, 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
Dibutylchlorendate (surr.)	1	%	50	114	74	50
Tetrachloro-m-xylene (surr.)	1	%	60	52	63	61
<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	%	50	114	74	50
Tetrachloro-m-xylene (surr.)	1	%	60	52	63	61
<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

Client Sample ID			SX_OB_20220 531_16_08_SS Duplicate_EU F	SX_IB_202205 31_20_32_SS Primary_EUF	SX_IB_202205 31_23_45_SS Primary_EUF	SX_IB_202206 01_03_55_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0000709	M22- Jn0000710	M22- Jn0000711	M22- Jn0000712
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	Jun 01, 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	%	84	62	89	87
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
<b>Chromium (hexavalent)</b>						
Chromium (hexavalent)	1	mg/kg	< 1	< 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	120
<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	8.3	7.9	9.7	8.2
<b>% Moisture</b>						
% Moisture	1	%	29	29	29	26
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	46	43	23	25
Cadmium	1	mg/kg	< 1	< 1	< 1	< 1
Chromium	5	mg/kg	120	160	130	180
Copper	5	mg/kg	55	62	64	72
Lead	5	mg/kg	6.8	< 5	5.0	< 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	170	200	190	200
Selenium	5	mg/kg	< 5	< 5	< 5	< 5
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	100	120	160	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 (PFTeDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	96	101	81	67
13C5-PFPeA (surr.)	1	%	97	102	87	70
13C5-PFHxA (surr.)	1	%	89	97	89	70

Client Sample ID			SX_OB_20220 531_16_08_SS Duplicate_EU F	SX_IB_202205 31_20_32_SS Primary_EUF	SX_IB_202205 31_23_45_SS Primary_EUF	SX_IB_202206 01_03_55_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0000709	M22- Jn0000710	M22- Jn0000711	M22- Jn0000712
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	Jun 01, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
13C4-PFHpA (surr.)	1	%	93	101	101	72
13C8-PFOA (surr.)	1	%	91	107	100	77
13C5-PFNA (surr.)	1	%	81	87	107	74
13C6-PFDA (surr.)	1	%	95	110	115	76
13C2-PFUnDA (surr.)	1	%	82	97	115	68
13C2-PFDoDA (surr.)	1	%	87	100	106	62
13C2-PFTeDA (surr.)	1	%	78	87	130	57
<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	%	90	103	105	62
D3-N-MeFOSA (surr.)	1	%	88	103	124	60
D5-N-EtFOSA (surr.)	1	%	90	107	125	59
D7-N-MeFOSE (surr.)	1	%	90	106	87	54
D9-N-EtFOSE (surr.)	1	%	93	106	87	61
D5-N-EtFOSAA (surr.)	1	%	95	103	111	63
D3-N-MeFOSAA (surr.)	1	%	93	104	112	67
<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	%	92	105	115	76
18O2-PFHxS (surr.)	1	%	90	101	114	73
13C8-PFOS (surr.)	1	%	86	105	115	76
<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	%	82	85	109	83
13C2-6:2 FTSA (surr.)	1	%	90	104	95	74



Client Sample ID			SX_OB_20220 531_16_08_SS Duplicate_EU F	SX_IB_202205 31_20_32_SS Primary_EUF	SX_IB_202205 31_23_45_SS Primary_EUF	SX_IB_202206 01_03_55_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0000709	M22- Jn0000710	M22- Jn0000711	M22- Jn0000712
Date Sampled			May 31, 2022	May 31, 2022	May 31, 2022	Jun 01, 2022
Test/Reference	LOR	Unit				
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
13C2-8:2 FTSA (surr.)	1	%	82	98	111	65
13C2-10:2 FTSA (surr.)	1	%	88	104	130	63
<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	Jun 01, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Jun 01, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Jun 01, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	Jun 01, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	Jun 01, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Jun 01, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	Jun 01, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	Jun 01, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Jun 01, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Jun 01, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	Jun 01, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	Jun 01, 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	Jun 02, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Jun 01, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	Jun 01, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Jun 01, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 01, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 01, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 01, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 01, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 01, 2022	

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<b>Project Name:</b>	20220601044422-Eurofin-8	<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_20220531_08_16_SS_Triplicate_EUF	May 31, 2022	8:16AM	Soil	M22-Jn0000705		X	X	X
2	SX_OB_20220531_08_21_SS_Primary_EUF	May 31, 2022	8:21AM	Soil	M22-Jn0000706		X	X	X
3	SX_OB_20220531_12_04_S_S_Primary_EUF	May 31, 2022	12:04PM	Soil	M22-Jn0000707		X	X	X

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Jun 1, 2022 12:15 PM
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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_20220531_16_07_SS_Primary_EUF	May 31, 2022	4:07PM	Soil	M22-Jn0000708		X	X	X
5	SX_OB_20220531_16_08_SS_Duplicate_EUF	May 31, 2022	4:08PM	Soil	M22-Jn0000709		X	X	X
6	SX_IB_20220531_20_32_SS_Primary_EUF	May 31, 2022	8:32PM	Soil	M22-Jn0000710		X	X	X
7	SX_IB_20220531_23_45_SS_Primary_EUF	May 31, 2022	11:45PM	Soil	M22-Jn0000711		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>									
8	SX_IB_20220601_03_55_SS_Primary_EUF	Jun 01, 2022	3:55AM	Soil	M22-Jn0000712		X	X	X
9	SX_IB_20220601_04_33_SB_Blank_EUF	Jun 01, 2022	4:33AM	Water	M22-Jn0000713			X	
10	SX_IB_20220601_04_34_SR_Rinsate_EUF	Jun 01, 2022	4:34AM	Water	M22-Jn0000714			X	
11	SX_OB_20220531_08_16_SS_Triplicate_EUF	May 31, 2022	8:16AM	AUS Leachate - pH 5.0	M22-Jn0000715	X		X	
12	SX_OB_20220531_08_21AM	May 31, 2022	8:21AM	AUS Leachate	M22-	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>									
	531_08_21__SS_Primary_EUF			- pH 5.0	Jn0000716				
13	SX_OB_20220531_12_04_SS_Primary_EUF	May 31, 2022	12:04PM	AUS Leachate - pH 5.0	M22-Jn0000717	X		X	
14	SX_OB_20220531_16_07_SS_Primary_EUF	May 31, 2022	4:07PM	AUS Leachate - pH 5.0	M22-Jn0000718	X		X	
15	SX_OB_20220531_16_08_SS_Duplicate_EUF	May 31, 2022	4:08PM	AUS Leachate - pH 5.0	M22-Jn0000719	X		X	

ABN: 50 005 085 521

ABN: 91 05 0159 898

NZBN: 9429046024954

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**Company Name:** Agon Environmental Pty Ltd - VIC  
**Address:** 3/224 Glen Osmond Road  
Fullarton  
SA 5063  
  
**Project Name:** 20220601044422-Eurofin-8  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 893567  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Jun 1, 2022 12:15 PM  
**Due:** Jun 8, 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>									
	UF								
16	SX_IB_20220531_20_32_SS_Primary_EUF	May 31, 2022	8:32PM	AUS Leachate - pH 5.0	M22-Jn0000720	X		X	
17	SX_IB_20220531_23_45_SS_Primary_EUF	May 31, 2022	11:45PM	AUS Leachate - pH 5.0	M22-Jn0000721	X		X	
18	SX_IB_20220601_03_55_SS_Primary_EUF	Jun 01, 2022	3:55AM	AUS Leachate - pH 5.0	M22-Jn0000722	X		X	
19	SX_OB_20220531_08_16_SS_Triplicate_EUF	May 31, 2022	8:16AM	AUS Leachate - Reagent Water	M22-Jn0000723	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>									
20	SX_OB_20220531_08_21_SS_Primary_EUF	May 31, 2022	8:21AM	AUS Leachate - Reagent Water	M22-Jn0000724	X		X	
21	SX_OB_20220531_12_04_SS_Primary_EUF	May 31, 2022	12:04PM	AUS Leachate - Reagent Water	M22-Jn0000725	X		X	
22	SX_OB_20220531_16_07_SS_Primary_EUF	May 31, 2022	4:07PM	AUS Leachate - Reagent Water	M22-Jn0000726	X		X	
23	SX_OB_20220531_16_08_SS	May 31, 2022	4:08PM	AUS Leachate - Reagent	M22-Jn0000727	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>									
	S_Duplicate_EUF			Water					
24	SX_IB_20220531_20_32_SS_Primary_EUF	May 31, 2022	8:32PM	AUS Leachate - Reagent Water	M22-Jn0000728	X		X	
25	SX_IB_20220531_23_45_SS_Primary_EUF	May 31, 2022	11:45PM	AUS Leachate - Reagent Water	M22-Jn0000729	X		X	
26	SX_IB_20220601_03_55_SS_Primary_EUF	Jun 01, 2022	3:55AM	AUS Leachate - Reagent Water	M22-Jn0000730	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	< 1			1	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	< 5			5	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	%	83		70-130	Pass	
TRH C10-C14	%	106		70-130	Pass	
Naphthalene	%	91		70-130	Pass	
TRH C6-C10	%	84		70-130	Pass	
TRH >C10-C16	%	107		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Volatile Organics</b>						
1.1-Dichloroethene	%	97		70-130	Pass	
1.1.1-Trichloroethane	%	95		70-130	Pass	
1.2-Dichlorobenzene	%	92		70-130	Pass	
1.2-Dichloroethane	%	83		70-130	Pass	
Benzene	%	99		70-130	Pass	
Ethylbenzene	%	94		70-130	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	95		70-130	Pass	
Toluene	%	82		70-130	Pass	
Trichloroethene	%	90		70-130	Pass	
Xylenes - Total*	%	96		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Polycyclic Aromatic Hydrocarbons</b>						
Acenaphthene	%	91		70-130	Pass	
Acenaphthylene	%	99		70-130	Pass	
Anthracene	%	126		70-130	Pass	
Benz(a)anthracene	%	87		70-130	Pass	
Benzo(a)pyrene	%	90		70-130	Pass	
Benzo(b&i)fluoranthene	%	87		70-130	Pass	
Benzo(g,h,i)perylene	%	87		70-130	Pass	
Benzo(k)fluoranthene	%	97		70-130	Pass	
Chrysene	%	123		70-130	Pass	
Dibenz(a,h)anthracene	%	119		70-130	Pass	
Fluoranthene	%	124		70-130	Pass	
Fluorene	%	116		70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	111		70-130	Pass	
Naphthalene	%	97		70-130	Pass	
Phenanthrene	%	127		70-130	Pass	
Pyrene	%	126		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Organochlorine Pesticides</b>						
Chlordanes - Total	%	86		70-130	Pass	
4,4'-DDD	%	108		70-130	Pass	
4,4'-DDE	%	102		70-130	Pass	
4,4'-DDT	%	125		70-130	Pass	
a-HCH	%	93		70-130	Pass	
Aldrin	%	92		70-130	Pass	
b-HCH	%	105		70-130	Pass	
d-HCH	%	107		70-130	Pass	
Dieldrin	%	91		70-130	Pass	
Endosulfan I	%	91		70-130	Pass	
Endosulfan II	%	94		70-130	Pass	
Endosulfan sulphate	%	92		70-130	Pass	
Endrin	%	95		70-130	Pass	
Endrin aldehyde	%	71		70-130	Pass	
Endrin ketone	%	98		70-130	Pass	
g-HCH (Lindane)	%	124		70-130	Pass	
Heptachlor	%	103		70-130	Pass	
Heptachlor epoxide	%	85		70-130	Pass	
Hexachlorobenzene	%	91		70-130	Pass	
Methoxychlor	%	115		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Polychlorinated Biphenyls</b>						
Aroclor-1260	%	121		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Phenols (Halogenated)</b>						
2-Chlorophenol	%	94		25-140	Pass	
2,4-Dichlorophenol	%	99		25-140	Pass	
2,4,5-Trichlorophenol	%	115		25-140	Pass	
2,4,6-Trichlorophenol	%	124		25-140	Pass	
2,6-Dichlorophenol	%	93		25-140	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
4-Chloro-3-methylphenol	%	98		25-140	Pass	
Pentachlorophenol	%	86		25-140	Pass	
Tetrachlorophenols - Total	%	97		25-140	Pass	
<b>LCS - % Recovery</b>						
<b>Phenols (non-Halogenated)</b>						
2-Cyclohexyl-4,6-dinitrophenol	%	54		25-140	Pass	
2-Methyl-4,6-dinitrophenol	%	75		25-140	Pass	
2-Nitrophenol	%	93		25-140	Pass	
2,4-Dimethylphenol	%	114		25-140	Pass	
2,4-Dinitrophenol	%	72		25-140	Pass	
2-Methylphenol (o-Cresol)	%	90		25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	124		25-140	Pass	
4-Nitrophenol	%	125		25-140	Pass	
Dinoseb	%	124		25-140	Pass	
Phenol	%	102		25-140	Pass	
<b>LCS - % Recovery</b>						
Chromium (hexavalent)	%	82		70-130	Pass	
Cyanide (total)	%	97		70-130	Pass	
Fluoride (Total)	%	92		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Heavy Metals</b>						
Arsenic	%	110		80-120	Pass	
Cadmium	%	116		80-120	Pass	
Chromium	%	116		80-120	Pass	
Copper	%	112		80-120	Pass	
Lead	%	110		80-120	Pass	
Mercury	%	117		80-120	Pass	
Molybdenum	%	106		80-120	Pass	
Nickel	%	106		80-120	Pass	
Selenium	%	107		80-120	Pass	
Silver	%	117		80-120	Pass	
Tin	%	109		80-120	Pass	
Zinc	%	112		80-120	Pass	
<b>LCS - % Recovery</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA)	%	96		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	90		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	88		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	95		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	98		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	89		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	101		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	100		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	101		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	99		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	104		50-150	Pass	
<b>LCS - % Recovery</b>						
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA)	%	85		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	103		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	100		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	102		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	99		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	88		50-150	Pass	



Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	105			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	105			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	90			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	108			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	95			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	98			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	84			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	90			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	89			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)	%	102			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	95			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	131			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	94			50-150	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Total Recoverable Hydrocarbons</b>				Result 1				
TRH C6-C9	N22-Jn0001326	NCP	%	85		70-130	Pass	
TRH C10-C14	M22-My0073044	NCP	%	129		70-130	Pass	
Naphthalene	N22-Jn0001326	NCP	%	102		70-130	Pass	
TRH C6-C10	N22-Jn0001326	NCP	%	85		70-130	Pass	
TRH >C10-C16	M22-My0073044	NCP	%	127		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Volatile Organics</b>				Result 1				
1.1-Dichloroethene	N22-Jn0001326	NCP	%	80		70-130	Pass	
1.1.1-Trichloroethane	N22-Jn0001326	NCP	%	75		70-130	Pass	
1.2-Dichlorobenzene	N22-Jn0001326	NCP	%	99		70-130	Pass	
1.2-Dichloroethane	N22-Jn0001326	NCP	%	91		70-130	Pass	
Benzene	N22-Jn0001326	NCP	%	79		70-130	Pass	
Ethylbenzene	N22-Jn0001326	NCP	%	99		70-130	Pass	
m&p-Xylenes	N22-Jn0001326	NCP	%	100		70-130	Pass	
o-Xylene	N22-Jn0001326	NCP	%	103		70-130	Pass	
Toluene	N22-Jn0001326	NCP	%	85		70-130	Pass	
Trichloroethene	N22-Jn0001326	NCP	%	95		70-130	Pass	
Xylenes - Total*	N22-Jn0001326	NCP	%	101		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1				
Acenaphthene	M22-Jn0004736	NCP	%	119		70-130	Pass	
Acenaphthylene	M22-Jn0004736	NCP	%	126		70-130	Pass	
Anthracene	M22-Jn0004736	NCP	%	119		70-130	Pass	
Benz(a)anthracene	M22-Jn0004736	NCP	%	107		70-130	Pass	
Benzo(a)pyrene	M22-Jn0004736	NCP	%	110		70-130	Pass	
Benzo(b&j)fluoranthene	M22-Jn0004736	NCP	%	83		70-130	Pass	
Benzo(g,h,i)perylene	M22-Jn0004736	NCP	%	119		70-130	Pass	
Benzo(k)fluoranthene	M22-Jn0004736	NCP	%	128		70-130	Pass	
Chrysene	M22-Jn0004736	NCP	%	113		70-130	Pass	
Dibenz(a,h)anthracene	M22-Jn0004736	NCP	%	98		70-130	Pass	
Fluoranthene	M22-Jn0004736	NCP	%	97		70-130	Pass	
Fluorene	M22-Jn0004736	NCP	%	96		70-130	Pass	
Indeno(1.2.3-cd)pyrene	M22-Jn0004736	NCP	%	93		70-130	Pass	
Naphthalene	M22-Jn0004736	NCP	%	127		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Phenanthrene	M22-Jn0004736	NCP	%	91		70-130	Pass	
Pyrene	M22-Jn0004736	NCP	%	103		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Organochlorine Pesticides</b>				Result 1				
Chlordanes - Total	M22-Jn0006770	NCP	%	75		70-130	Pass	
4.4'-DDD	M22-Jn0006770	NCP	%	105		70-130	Pass	
4.4'-DDE	M22-Jn0006770	NCP	%	98		70-130	Pass	
4.4'-DDT	M22-Jn0006770	NCP	%	95		70-130	Pass	
a-HCH	M22-Jn0006770	NCP	%	85		70-130	Pass	
Aldrin	M22-Jn0006770	NCP	%	82		70-130	Pass	
b-HCH	M22-Jn0006770	NCP	%	97		70-130	Pass	
d-HCH	M22-Jn0006770	NCP	%	90		70-130	Pass	
Dieldrin	M22-Jn0006770	NCP	%	79		70-130	Pass	
Endosulfan I	M22-Jn0006770	NCP	%	88		70-130	Pass	
Endosulfan II	M22-Jn0006770	NCP	%	93		70-130	Pass	
Endosulfan sulphate	M22-Jn0006770	NCP	%	71		70-130	Pass	
Endrin	M22-Jn0006770	NCP	%	78		70-130	Pass	
Endrin aldehyde	M22-Jn0006770	NCP	%	85		70-130	Pass	
Endrin ketone	M22-Jn0006770	NCP	%	93		70-130	Pass	
g-HCH (Lindane)	M22-Jn0006770	NCP	%	121		70-130	Pass	
Heptachlor	M22-Jn0006770	NCP	%	77		70-130	Pass	
Heptachlor epoxide	M22-Jn0006770	NCP	%	70		70-130	Pass	
Hexachlorobenzene	M22-Jn0006770	NCP	%	77		70-130	Pass	
Methoxychlor	M22-Jn0006770	NCP	%	105		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Polychlorinated Biphenyls</b>				Result 1				
Aroclor-1016	M22-Jn0010410	NCP	%	92		70-130	Pass	
Aroclor-1260	M22-Jn0010410	NCP	%	84		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (Halogenated)</b>				Result 1				
2-Chlorophenol	M22-Jn0004736	NCP	%	73		30-130	Pass	
2,4-Dichlorophenol	M22-Jn0004736	NCP	%	74		30-130	Pass	
2,4,5-Trichlorophenol	M22-Jn0004736	NCP	%	42		30-130	Pass	
2,4,6-Trichlorophenol	M22-Jn0004736	NCP	%	53		30-130	Pass	
2,6-Dichlorophenol	M22-Jn0004736	NCP	%	66		30-130	Pass	
4-Chloro-3-methylphenol	M22-Jn0004736	NCP	%	74		30-130	Pass	
Pentachlorophenol	M22-Jn0004736	NCP	%	53		30-130	Pass	
Tetrachlorophenols - Total	M22-Jn0004736	NCP	%	58		30-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (non-Halogenated)</b>				Result 1				
2-Cyclohexyl-4,6-dinitrophenol	M22-Jn0008942	NCP	%	118		30-130	Pass	
2-Methyl-4,6-dinitrophenol	M22-Jn0004736	NCP	%	65		30-130	Pass	
2-Nitrophenol	M22-Jn0004736	NCP	%	68		30-130	Pass	
2,4-Dimethylphenol	M22-Jn0004736	NCP	%	86		30-130	Pass	
2,4-Dinitrophenol	M22-Jn0004736	NCP	%	66		30-130	Pass	
2-Methylphenol (o-Cresol)	M22-Jn0004736	NCP	%	72		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-Jn0004736	NCP	%	99		30-130	Pass	
4-Nitrophenol	M22-Jn0004736	NCP	%	53		30-130	Pass	
Dinoseb	M22-Jn0004736	NCP	%	81		30-130	Pass	
Phenol	M22-Jn0004736	NCP	%	86		30-130	Pass	
<b>Spike - % Recovery</b>								
				Result 1				
Cyanide (total)	M22-Jn0000479	NCP	%	78		70-130	Pass	
Fluoride (Total)	M22-My0075894	NCP	%	99		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Arsenic	M22-Jn0001496	NCP	%	91		75-125	Pass	
Cadmium	M22-Jn0001496	NCP	%	90		75-125	Pass	
Chromium	M22-Jn0001496	NCP	%	97		75-125	Pass	
Copper	M22-Jn0001496	NCP	%	99		75-125	Pass	
Lead	M22-Jn0001496	NCP	%	95		75-125	Pass	
Mercury	M22-Jn0001496	NCP	%	106		75-125	Pass	
Molybdenum	M22-Jn0001496	NCP	%	90		75-125	Pass	
Nickel	M22-Jn0001496	NCP	%	91		75-125	Pass	
Selenium	M22-Jn0001496	NCP	%	90		75-125	Pass	
Silver	M22-Jn0001496	NCP	%	95		75-125	Pass	
Tin	M22-Jn0001496	NCP	%	94		75-125	Pass	
Zinc	M22-Jn0001496	NCP	%	96		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1				
Perfluorobutanoic acid (PFBA)	M22-Jn0000577	NCP	%	105		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Jn0000577	NCP	%	102		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Jn0000577	NCP	%	102		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Jn0000577	NCP	%	106		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Jn0000577	NCP	%	110		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Jn0000577	NCP	%	100		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Jn0000577	NCP	%	113		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Jn0000577	NCP	%	122		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Jn0000577	NCP	%	117		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Jn0000577	NCP	%	118		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Jn0000577	NCP	%	120		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1				
Perfluorooctane sulfonamide (FOSA)	M22-Jn0000577	NCP	%	97		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Jn0000577	NCP	%	113		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Jn0000577	NCP	%	112		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Jn0000577	NCP	%	115		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Jn0000577	NCP	%	111		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Jn0000577	NCP	%	107		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Jn0000577	NCP	%	116		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>				Result 1				
Perfluorobutanesulfonic acid (PFBS)	M22-Jn0000577	NCP	%	118		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Jn0000577	NCP	%	107		50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Jn0000577	NCP	%	117		50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Jn0000577	NCP	%	108		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorohexanesulfonic acid (PFHxS)	M22-Jn0000577	NCP	%	111			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Jn0000577	NCP	%	89			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Jn0000577	NCP	%	107			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Jn0000577	NCP	%	103			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-Jn0000577	NCP	%	113			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Jn0000577	NCP	%	124			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Jn0000577	NCP	%	146			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Jn0000577	NCP	%	105			50-150	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	M22-My0075552	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Cyanide (total)	M22-Jn0000476	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Jn0001356	NCP	pH Units	7.6	7.5	pass	30%	Pass	
% Moisture	L22-Jn0000699	NCP	%	6.0	6.3	5.0	30%	Pass	
<b>Duplicate</b>									
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
<b>Duplicate</b>									
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	L22-My0075007	NCP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	L22-My0075007	NCP	ug/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA's)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	L22-My0075007	NCP	ug/kg	7.9	6.2	23	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	L22-My0075007	NCP	ug/kg	39	26	41	30%	Fail Q15
Perfluorodecanesulfonic acid (PFDS)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	L22-My0075007	NCP	ug/kg	< 10	< 10	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	L22-My0075007	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C6-C9	M22-Jn0000709	CP	mg/kg	< 20	< 20	<1	30%	Pass
Naphthalene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	M22-Jn0000709	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Hexachlorobutadiene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.1-Dichloroethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trichlorobenzene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1-Dichloroethene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1-Trichloroethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1.2-Tetrachloroethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2-Trichloroethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2.2-Tetrachloroethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dibromoethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichlorobenzene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloroethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloropropane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.3-Trichloropropane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trimethylbenzene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.3-Dichlorobenzene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichloropropane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3.5-Trimethylbenzene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.4-Dichlorobenzene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzene	M22-Jn0000709	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Bromobenzene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	M22-Jn0000709	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	M22-Jn0000709	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	M22-Jn0000709	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	M22-Jn0000709	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1.2-Dichloroethene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.3-Dichloropropene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-Jn0000709	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total*	M22-Jn0000709	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M22-Jn0000709	CP	mg/kg	46	57	20	30%	Pass
Cadmium	M22-Jn0000709	CP	mg/kg	< 1	< 1	<1	30%	Pass
Chromium	M22-Jn0000709	CP	mg/kg	120	130	7.0	30%	Pass
Copper	M22-Jn0000709	CP	mg/kg	55	60	7.0	30%	Pass
Lead	M22-Jn0000709	CP	mg/kg	6.8	6.4	7.0	30%	Pass
Mercury	M22-Jn0000709	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M22-Jn0000709	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M22-Jn0000709	CP	mg/kg	170	150	12	30%	Pass
Selenium	M22-Jn0000709	CP	mg/kg	< 5	< 5	<1	30%	Pass
Silver	M22-Jn0000709	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-Jn0000709	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M22-Jn0000709	CP	mg/kg	100	97	4.0	30%	Pass

Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	M22-Jn0000711	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M22-Jn0000711	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M22-Jn0000711	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	M22-Jn0000711	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M22-Jn0000711	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M22-Jn0000711	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)anthracene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M22-Jn0000711	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-Jn0000711	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M22-Jn0000711	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-Jn0000711	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-Jn0000711	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-Jn0000711	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-Jn0000711	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass

<b>Duplicate</b>								
<b>Polychlorinated Biphenyls</b>				Result 1	Result 2	RPD		
Aroclor-1254	M22-Jn0000711	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-Jn0000711	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-Jn0000711	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
<b>Duplicate</b>								
<b>Phenols (Halogenated)</b>				Result 1	Result 2	RPD		
2-Chlorophenol	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M22-Jn0000711	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M22-Jn0000711	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-Jn0000711	CP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-Jn0000711	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-Jn0000711	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-Jn0000711	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M22-Jn0000711	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-Jn0000711	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	M22-Jn0000711	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-Jn0000711	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-Jn0000711	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M22-Jn0000711	CP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-Jn0000711	CP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-Jn0000711	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Fluoride (Total)	M22-Jn0000712	CP	mg/kg	120	< 100	27	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).
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

**Authorised by:**

Michael Cassidy	Analytical Services Manager
Caitlin Breeze	Senior Analyst-Inorganic
Carroll Lee	Senior Analyst-Volatile
Edward Lee	Senior Analyst-Organic
Joseph Edouard	Senior Analyst-PFAS
Linda Chouman	Senior Analyst-Sample Properties
Mary Makarios	Senior Analyst-Metal
Vivian Wang	Senior Analyst-Volatile



**Glenn Jackson**  
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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



NATA Accredited  
Accreditation Number 1261  
Site Number 1254

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

Attention: **David Lawson**

Report **893567-W**  
Project name **20220601044422-Eurofin-8**  
Project ID **JC0927**  
Received Date **Jun 01, 2022**

Client Sample ID			SX_IB_202206 01_04_33_SB_Blank_EUF	SX_IB_202206 01_04_34_SR_Rinsate_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22-Jn0000713	M22-Jn0000714
Date Sampled			Jun 01, 2022	Jun 01, 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 (PFTrDA) <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	%	77	79
13C5-PFPeA (surr.)	1	%	104	103
13C5-PFHxA (surr.)	1	%	94	93
13C4-PFHpA (surr.)	1	%	95	96
13C8-PFOA (surr.)	1	%	126	128
13C5-PFNA (surr.)	1	%	125	127
13C6-PFDA (surr.)	1	%	108	96
13C2-PFUnDA (surr.)	1	%	104	107
13C2-PFDoDA (surr.)	1	%	93	93
13C2-PFTeDA (surr.)	1	%	86	89
<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	%	121	118

Client Sample ID			SX_IB_202206 01_04_33_SB_Blank_EUF	SX_IB_202206 01_04_34_SR_Rinsate_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22-Jn0000713	M22-Jn0000714
Date Sampled			Jun 01, 2022	Jun 01, 2022
Test/Reference	LOR	Unit		
<b>Perfluoroalkyl sulfonamido substances</b>				
D3-N-MeFOSA (surr.)	1	%	72	67
D5-N-EtFOSA (surr.)	1	%	77	72
D7-N-MeFOSE (surr.)	1	%	83	76
D9-N-EtFOSE (surr.)	1	%	80	78
D5-N-EtFOSAA (surr.)	1	%	135	141
D3-N-MeFOSAA (surr.)	1	%	97	104
<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	%	99	100
18O2-PFHxS (surr.)	1	%	110	105
13C8-PFOS (surr.)	1	%	110	109
<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	%	38	40
13C2-6:2 FTSA (surr.)	1	%	100	90
13C2-8:2 FTSA (surr.)	1	%	66	62
13C2-10:2 FTSA (surr.)	1	%	142	139
<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	Jun 01, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Jun 01, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Jun 01, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Jun 01, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Jun 01, 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>	Jun 1, 2022 12:15 PM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	893567	<b>Due:</b>	Jun 8, 2022
<b>Project Name:</b>	20220601044422-Eurofin-8	<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_20220531_08_16_SS_Triplicate_EUF	May 31, 2022	8:16AM	Soil	M22-Jn0000705		X	X	X
2	SX_OB_20220531_08_21_SS_Primary_EUF	May 31, 2022	8:21AM	Soil	M22-Jn0000706		X	X	X
3	SX_OB_20220531_12_04_S_S_Primary_EUF	May 31, 2022	12:04PM	Soil	M22-Jn0000707		X	X	X

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Jun 1, 2022 12:15 PM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	893567	<b>Due:</b>	Jun 8, 2022
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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_20220531_16_07_SS_Primary_EUF	May 31, 2022	4:07PM	Soil	M22-Jn0000708		X	X	X
5	SX_OB_20220531_16_08_SS_Duplicate_EUF	May 31, 2022	4:08PM	Soil	M22-Jn0000709		X	X	X
6	SX_IB_20220531_20_32_SS_Primary_EUF	May 31, 2022	8:32PM	Soil	M22-Jn0000710		X	X	X
7	SX_IB_20220531_23_45_SS_Primary_EUF	May 31, 2022	11:45PM	Soil	M22-Jn0000711		X	X	X

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Jun 1, 2022 12:15 PM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	893567	<b>Due:</b>	Jun 8, 2022
<b>Project Name:</b>	20220601044422-Eurofin-8	<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_IB_20220601_03_55_SS_Primary_EUF	Jun 01, 2022	3:55AM	Soil	M22-Jn0000712		X	X	X
9	SX_IB_20220601_04_33_SB_Blank_EUF	Jun 01, 2022	4:33AM	Water	M22-Jn0000713			X	
10	SX_IB_20220601_04_34_SR_Rinsate_EUF	Jun 01, 2022	4:34AM	Water	M22-Jn0000714			X	
11	SX_OB_20220531_08_16_SS_Triplicate_EUF	May 31, 2022	8:16AM	AUS Leachate - pH 5.0	M22-Jn0000715	X		X	
12	SX_OB_20220531_08_21AM	May 31, 2022	8:21AM	AUS Leachate	M22-	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Jun 1, 2022 12:15 PM
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<b>Project Name:</b>	20220601044422-Eurofin-8	<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>									
	531_08_21__SS_Primary_EUF			- pH 5.0	Jn0000716				
13	SX_OB_20220531_12_04_SS_Primary_EUF	May 31, 2022	12:04PM	AUS Leachate - pH 5.0	M22-Jn0000717	X		X	
14	SX_OB_20220531_16_07_SS_Primary_EUF	May 31, 2022	4:07PM	AUS Leachate - pH 5.0	M22-Jn0000718	X		X	
15	SX_OB_20220531_16_08_SS_Duplicate_EUF	May 31, 2022	4:08PM	AUS Leachate - pH 5.0	M22-Jn0000719	X		X	



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<b>Project Name:</b>	20220601044422-Eurofin-8	<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>									
	UF								
16	SX_IB_20220531_20_32_SS_Primary_EUF	May 31, 2022	8:32PM	AUS Leachate - pH 5.0	M22-Jn0000720	X		X	
17	SX_IB_20220531_23_45_SS_Primary_EUF	May 31, 2022	11:45PM	AUS Leachate - pH 5.0	M22-Jn0000721	X		X	
18	SX_IB_20220601_03_55_SS_Primary_EUF	Jun 01, 2022	3:55AM	AUS Leachate - pH 5.0	M22-Jn0000722	X		X	
19	SX_OB_20220531_08_16_SS_Triplicate_EUF	May 31, 2022	8:16AM	AUS Leachate - Reagent Water	M22-Jn0000723	X		X	

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<b>Project Name:</b>	20220601044422-Eurofin-8	<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>									
20	SX_OB_20220531_08_21_SS_Primary_EUF	May 31, 2022	8:21AM	AUS Leachate - Reagent Water	M22-Jn0000724	X		X	
21	SX_OB_20220531_12_04_SS_Primary_EUF	May 31, 2022	12:04PM	AUS Leachate - Reagent Water	M22-Jn0000725	X		X	
22	SX_OB_20220531_16_07_SS_Primary_EUF	May 31, 2022	4:07PM	AUS Leachate - Reagent Water	M22-Jn0000726	X		X	
23	SX_OB_20220531_16_08_SS	May 31, 2022	4:08PM	AUS Leachate - Reagent	M22-Jn0000727	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Jun 1, 2022 12:15 PM
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<b>Project Name:</b>	20220601044422-Eurofin-8	<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_Duplicate_EUF			Water					
24	SX_IB_20220531_20_32_SS_Primary_EUF	May 31, 2022	8:32PM	AUS Leachate - Reagent Water	M22-Jn0000728	X		X	
25	SX_IB_20220531_23_45_SS_Primary_EUF	May 31, 2022	11:45PM	AUS Leachate - Reagent Water	M22-Jn0000729	X		X	
26	SX_IB_20220601_03_55_SS_Primary_EUF	Jun 01, 2022	3:55AM	AUS Leachate - Reagent Water	M22-Jn0000730	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)	%	116		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	104		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	87		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	85		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	84		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	86		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	84		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	95		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	93		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	93		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	97		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)	%	87			50-150	Pass			
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	118			50-150	Pass			
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	123			50-150	Pass			
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	104			50-150	Pass			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	103			50-150	Pass			
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	96			50-150	Pass			
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	114			50-150	Pass			
<b>LCS - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>									
Perfluorobutanesulfonic acid (PFBS)	%	80			50-150	Pass			
Perfluorononanesulfonic acid (PFNS)	%	80			50-150	Pass			
Perfluoropropanesulfonic acid (PFPrS)	%	89			50-150	Pass			
Perfluoropentanesulfonic acid (PFPeS)	%	88			50-150	Pass			
Perfluorohexanesulfonic acid (PFHxS)	%	95			50-150	Pass			
Perfluoroheptanesulfonic acid (PFHpS)	%	94			50-150	Pass			
Perfluorooctanesulfonic acid (PFOS)	%	88			50-150	Pass			
Perfluorodecanesulfonic acid (PFDS)	%	62			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)	%	107			50-150	Pass			
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	60			50-150	Pass			
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	90			50-150	Pass			
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	102			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-Jn0000445	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Jn0000445	NCP	ug/L	0.01	0.02	20	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Jn0000445	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-Jn0000445	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Jn0000445	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Jn0000445	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Jn0000445	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Jn0000445	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Jn0000445	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Jn0000445	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA's)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Jn0000445	NCP	ug/L	0.03	0.03	10	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Jn0000445	NCP	ug/L	0.09	0.06	51	30%	Fail Q15
Perfluorodecanesulfonic acid (PFDS)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Jn0000445	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Jn0000445	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Jn0000445	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).
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

**Authorised by:**

Michael Cassidy	Analytical Services Manager
Joseph Edouard	Senior Analyst-PFAS



**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.



**CHAIN OF CUSTODY DOCUMENTATION**

CLIENT: Agon Environmental  
 ADDRESS/OFFICE: Melbourne  
 PROJECT MANAGER (PM): Craig Trimbur  
 PROJECT ID: JC0827

SAMPLER: Willi - Agon  
 Maritba - Agon  
 MOBILE 1: +61 400 826 907 (Craig Trimbur)  
 MOBILE 2: +61 490 411 004 (David Lawton)  
 EMAIL REPORT TO: Labreports.TSI@agonenviro.com.au  
 anotherhublabresults@wrlp.com.au

Labreports.TSI@agonenviro.com.au  
 agonenvironmental@esdal.com.au



SITE: 2022053104306; ALS 52  
 RESULTS REQUIRED (Date): 5 days  
 QUOTE NO. ME-150-19/WGTP

EMAIL INVOICE TO: (if different to report)  
 ANALYSIS REQUIRED INCLUDING SUITES (note - suite codes must be listed to attract suite prices)

ALS ID	SAMPLE INFORMATION (note: S = Soil, W=Water)			CONTAINER INFORMATION		P16 plus Cr	PFS 28 Extended suite	ASLP PFS - Extended Suite (Lab to determine pH)	DI Leachate PFS - Extended Suite	Notes:
	SAMPLE ID	MATRIX	DATE	Time	Type / Code					
1/10	SX_OB_20220530_07_48_SS_Primary_ALS	S	30/05/2022	07:48	Bucket	1	X	X	X	
2/11	SX_OB_20220530_07_48_SS_Duplicate_ALS	S	30/05/2022	07:49	Bucket	1	X	X	X	
3/11	SX_OB_20220530_12_45_SS_Primary_ALS	S	30/05/2022	12:45	Bucket	1	X	X	X	
4/13	SX_OB_20220530_12_55_SS_Primary_ALS	S	30/05/2022	12:55	Bucket	1	X	X	X	
5/14	SX_OB_20220530_15_49_SS_Primary_ALS	S	30/05/2022	15:49	Bucket	1	X	X	X	
6/15	SX_OB_20220530_16_05_SS_Triplicate_ALS	S	30/05/2022	16:05	Bucket	1	X	X	X	
7/16	SX_OB_20220530_20_08_SS_Primary_ALS	S	30/05/2022	20:08	Bucket	1	X	X	X	
8/17	SX_OB_20220531_00_01_SS_Primary_ALS	S	31/05/2022	00:01	Bucket	1	X	X	X	
9/18	SX_OB_20220531_04_06_SS_Primary_ALS	S	31/05/2022	04:06	Bucket	1	X	X	X	

RELINQUISHED BY: Name: *MARIL* Date: *31/5*  
 Of: *AM* Cor' Note No:  
 Name: Date: Time:  
 Name: Date: Time:  
 Name: Date: Time:  
 Name: Date: Time:

RECEIVED BY: Name: *MARIL* Date: *31/5*  
 Of: *AM* Cor' Note No:  
 Name: Date: Time:  
 Name: Date: Time:  
 Name: Date: Time:

METHOD OF SHIPMENT  
 Transport Co:

**Water Container Codes:** P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved;  
 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 Bottle; ST = Sterile Bottle; ASS = Plastic; Bad for Acid Sulphate Soils; B = Unpreserved Bag.

Environmental Division  
 Melbourne  
 Work Order Reference  
**EM2210112**



Telephone : + 61-3-8549 9600

## CERTIFICATE OF ANALYSIS

<b>Work Order</b>	<b>: EM2210112</b>	<b>Page</b>	: 1 of 27
<b>Client</b>	<b>: AGON ENVIRONMENTAL PTY LTD</b>	<b>Laboratory</b>	: Environmental Division Melbourne
<b>Contact</b>	: Craig Trimbur	<b>Contact</b>	: Josh Alexander
<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>	: +61-3-8549 9600
<b>Project</b>	: JC0927	<b>Date Samples Received</b>	: 31-May-2022 09:40
<b>Order number</b>	: ----	<b>Date Analysis Commenced</b>	: 31-May-2022
<b>C-O-C number</b>	: 20220531044306-ALS-52	<b>Issue Date</b>	: 07-Jun-2022 16:30
<b>Sampler</b>	: Martha, Will		
<b>Site</b>	: 20220531044306-ALS-52		
<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 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>
Andrew Lu	VOC Section Supervisor	Melbourne Inorganics, Springvale, VIC
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, 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 Contract for details.

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

- 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.
- EG005-T : EM2209872 #4 Poor spike recovery for Zinc due to sample matrix. Confirmed by re-digestion and re-analysis.
- EG005-T : EM2210112 #8 Poor spike recovery for Zinc due to sample matrix. Confirmed by re-digestion and 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, PFTTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.
- EN60: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.
- EN60-DI: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.



## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220530_07_48_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS	SX_OB_20220530_12_45_SS_Primary_ALS	SX_OB_20220530_12_55_SS_Primary_ALS	SX_OB_20220530_15_49_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-001	EM2210112-002	EM2210112-003	EM2210112-004	EM2210112-005
				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_20220530_07_48_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS	SX_OB_20220530_12_45_SS_Primary_ALS	SX_OB_20220530_12_55_SS_Primary_ALS	SX_OB_20220530_15_49_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-001	EM2210112-002	EM2210112-003	EM2210112-004	EM2210112-005
				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	%	108	126	111	104	116
13C8-PFOA	----	0.02	%	100	112	105	103	104



## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220530_16_05_SS_Triplicate_ALS	SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220531_00_01_SS_Primary_ALS	SX_OB_20220531_04_08_SS_Primary_ALS	----
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	31-May-2022 00:00	31-May-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2210112-006	EM2210112-007	EM2210112-008	EM2210112-009	-----
				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	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<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	----



## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220530_16_05_SS_Triplicate_ALS	SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220531_00_01_SS_Primary_ALS	SX_OB_20220531_04_08_SS_Primary_ALS	----
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	31-May-2022 00:00	31-May-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2210112-006	EM2210112-007	EM2210112-008	EM2210112-009	-----
				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	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<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	----
<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	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	----	0.10	µg/L	<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	----
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	104	109	106	109	----
13C8-PFOA	----	0.02	%	105	108	102	106	----



## Analytical Results

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

Sample ID

				SX_OB_20220530_07_48_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS	SX_OB_20220530_12_45_SS_Primary_ALS	SX_OB_20220530_12_55_SS_Primary_ALS	SX_OB_20220530_15_49_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-010	EM2210112-011	EM2210112-012	EM2210112-013	EM2210112-014
				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_20220530_07_48_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS	SX_OB_20220530_12_45_SS_Primary_ALS	SX_OB_20220530_12_55_SS_Primary_ALS	SX_OB_20220530_15_49_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-010	EM2210112-011	EM2210112-012	EM2210112-013	EM2210112-014
				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	%	92.3	111	108	104	99.1
13C8-PFOA	----	0.02	%	95.2	99.9	104	92.6	96.0



## Analytical Results

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

Sample ID

				SX_OB_20220530_16 _05_SS_Triplicate_AL S	SX_OB_20220530_20 _08_SS_Primary_ALS	SX_OB_20220531_00 _01_SS_Primary_ALS	SX_OB_20220531_04 _08_SS_Primary_ALS	----
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	31-May-2022 00:00	31-May-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2210112-015	EM2210112-016	EM2210112-017	EM2210112-018	-----
				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	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<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	----



## Analytical Results

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

Sample ID

				SX_OB_20220530_16_05_SS_Triplicate_ALS	SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220531_00_01_SS_Primary_ALS	SX_OB_20220531_04_08_SS_Primary_ALS	----
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	31-May-2022 00:00	31-May-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2210112-015	EM2210112-016	EM2210112-017	EM2210112-018	-----
				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	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<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	----
<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	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	----	0.10	µg/L	<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	----
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	97.7	93.1	98.7	102	----
13C8-PFOA	----	0.02	%	92.8	100	97.5	103	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220530_07_48_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS	SX_OB_20220530_12_45_SS_Primary_ALS	SX_OB_20220530_12_55_SS_Primary_ALS	SX_OB_20220530_15_49_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-001	EM2210112-002	EM2210112-003	EM2210112-004	EM2210112-005
				Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
pH (CaCl2)	----	0.1	pH Unit	7.7	7.7	7.6	8.2	7.7
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	29.5	29.0	33.7	33.5	31.2
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	64	61	35	38	34
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	5	mg/kg	104	79	109	106	74
Copper	7440-50-8	5	mg/kg	31	31	69	65	40
Lead	7439-92-1	5	mg/kg	8	5	<5	<5	<5
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	<5	<5
Nickel	7440-02-0	5	mg/kg	63	62	159	168	126
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	37	47	134	117	66
<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	160	240	170	160	190
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Initial pH	----	0.1	pH Unit	7.6	6.8	8.1	9.2	8.3
After HCl pH	----	0.1	pH Unit	1.2	1.2	1.2	1.2	1.1
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_OB_20220530_07_48_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS	SX_OB_20220530_12_45_SS_Primary_ALS	SX_OB_20220530_12_55_SS_Primary_ALS	SX_OB_20220530_15_49_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-001	EM2210112-002	EM2210112-003	EM2210112-004	EM2210112-005
				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_20220530_07 48_SS_Primary_ALS	SX_OB_20220530_07 49_SS_Duplicate_ALS	SX_OB_20220530_12 45_SS_Primary_ALS	SX_OB_20220530_12 55_SS_Primary_ALS	SX_OB_20220530_15 49_SS_Primary_ALS
		Sampling date / time		30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-001	EM2210112-002	EM2210112-003	EM2210112-004	EM2210112-005
				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_20220530_07_48_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS	SX_OB_20220530_12_45_SS_Primary_ALS	SX_OB_20220530_12_55_SS_Primary_ALS	SX_OB_20220530_15_49_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-001	EM2210112-002	EM2210112-003	EM2210112-004	EM2210112-005
				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_20220530_07_48_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS	SX_OB_20220530_12_45_SS_Primary_ALS	SX_OB_20220530_12_55_SS_Primary_ALS	SX_OB_20220530_15_49_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-001	EM2210112-002	EM2210112-003	EM2210112-004	EM2210112-005
				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_20220530_07_48_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS	SX_OB_20220530_12_45_SS_Primary_ALS	SX_OB_20220530_12_55_SS_Primary_ALS	SX_OB_20220530_15_49_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-001	EM2210112-002	EM2210112-003	EM2210112-004	EM2210112-005
				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_20220530_07_48_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS	SX_OB_20220530_12_45_SS_Primary_ALS	SX_OB_20220530_12_55_SS_Primary_ALS	SX_OB_20220530_15_49_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-001	EM2210112-002	EM2210112-003	EM2210112-004	EM2210112-005
				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	%	91.6	100	95.6	104	108
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	100	66.3	99.5	93.3	95.2
Toluene-D8	2037-26-5	0.1	%	88.7	60.4	87.8	86.5	85.0
4-Bromofluorobenzene	460-00-4	0.1	%	107	75.9	107	103	105
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>								
Phenol-d6	13127-88-3	0.025	%	87.8	99.4	93.2	102	108
2-Chlorophenol-D4	93951-73-6	0.025	%	99.7	113	107	117	125
2,4,6-Tribromophenol	118-79-6	0.025	%	72.6	83.1	73.1	79.2	81.7
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>								
Nitrobenzene-D5	4165-60-0	0.025	%	84.5	95.7	89.0	98.6	108
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	84.4	95.3	90.7	98.2	105
2-Fluorobiphenyl	321-60-8	0.025	%	93.3	105	96.8	104	112
Anthracene-d10	1719-06-8	0.025	%	89.3	100	94.3	102	109
4-Terphenyl-d14	1718-51-0	0.025	%	88.8	99.9	94.1	104	109
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.0002	%	122	101	114	105	115
13C8-PFOA	----	0.0002	%	110	109	125	113	109



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220530_16_05_SS_Triplicate_ALS	SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220531_00_01_SS_Primary_ALS	SX_OB_20220531_04_08_SS_Primary_ALS	SX_OB_20220530_07_48_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	31-May-2022 00:00	31-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-006	EM2210112-007	EM2210112-008	EM2210112-009	EM2210112-010
				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	8.5	7.6	----
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	28.1	32.3	31.5	31.3	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	52	48	37	71	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	----
Chromium	7440-47-3	5	mg/kg	89	96	105	74	----
Copper	7440-50-8	5	mg/kg	52	56	57	37	----
Lead	7439-92-1	5	mg/kg	<5	<5	<5	6	----
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	<5	----
Nickel	7440-02-0	5	mg/kg	150	150	184	52	----
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	----
Silver	7440-22-4	2	mg/kg	<2	<2	<2	<2	----
Tin	7440-31-5	10	mg/kg	<10	<10	<10	<10	----
Zinc	7440-66-6	5	mg/kg	81	95	86	38	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<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	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
Total Cyanide	57-12-5	5	mg/kg	<5	<5	<5	<5	----
<b>EK040T: Fluoride Total</b>								
Fluoride	16984-48-8	100	mg/kg	200	180	180	170	----
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Initial pH	----	0.1	pH Unit	8.4	8.3	8.9	7.6	----
After HCl pH	----	0.1	pH Unit	1.1	1.1	1.2	1.1	----
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	5.0	----
Final pH	----	0.1	pH Unit	5.1	5.1	5.1	5.1	----
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Final pH	----	0.1	pH Unit	----	----	----	----	9.3
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220530_16_05_SS_Triplicate_ALS	SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220531_00_01_SS_Primary_ALS	SX_OB_20220531_04_08_SS_Primary_ALS	SX_OB_20220530_07_48_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	31-May-2022 00:00	31-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-006	EM2210112-007	EM2210112-008	EM2210112-009	EM2210112-010
				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	<0.2	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	<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	----
Styrene	100-42-5	0.5	mg/kg	<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	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
<b>EP074H: Naphthalene</b>								
Naphthalene	91-20-3	1	mg/kg	<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	----
1,1-Dichloroethene	75-35-4	0.50	mg/kg	<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	----
trans-1,2-Dichloroethene	156-60-5	0.50	mg/kg	<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	----
Chloroform	67-66-3	0.50	mg/kg	<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	----
Carbon Tetrachloride	56-23-5	0.50	mg/kg	<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	----
Trichloroethene	79-01-6	0.50	mg/kg	<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	----
Tetrachloroethene	127-18-4	0.50	mg/kg	<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	----
1,1,2,2-Tetrachloroethane	79-34-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Hexachlorobutadiene	87-68-3	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Chlorobenzene	108-90-7	0.50	mg/kg	<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	----
1,2-Dichlorobenzene	95-50-1	0.50	mg/kg	<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	----
^ Sum of volatile chlorinated hydrocarbons	----	0.50	mg/kg	<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	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220530_16_05_SS_Triplicate_ALS	SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220531_00_01_SS_Primary_ALS	SX_OB_20220531_04_08_SS_Primary_ALS	SX_OB_20220530_07_48_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	31-May-2022 00:00	31-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-006	EM2210112-007	EM2210112-008	EM2210112-009	EM2210112-010
				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	<0.50	----
2,4-Dichlorophenol	120-83-2	0.50	mg/kg	<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	----
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<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	----
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<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	----
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	----
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	----
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<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	----
2-Methylphenol	95-48-7	1	mg/kg	<1	<1	<1	<1	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	----
2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	<1	<1	----
2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	<1	<1	----
2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	<5	<5	----
4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	<5	<5	----
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	<5	<5	----
Dinoseb	88-85-7	20	mg/kg	<20	<20	<20	<20	----
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	20	mg/kg	<20	<20	<20	<20	----
^ Sum of Phenols (non-halogenated)	----	20	mg/kg	<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	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	<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	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

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Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	31-May-2022 00:00	31-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-006	EM2210112-007	EM2210112-008	EM2210112-009	EM2210112-010
				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	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<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	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<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	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<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	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<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>	----
^ 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>EP075I: Organochlorine Pesticides</b>								
alpha-BHC	319-84-6	0.05	mg/kg	<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	----
beta-BHC	319-85-7	0.05	mg/kg	<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	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	<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	----
cis-Chlordane	5103-71-9	0.03	mg/kg	<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	----
Endosulfan 1	959-98-8	0.05	mg/kg	<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	----
Dieldrin	60-57-1	0.05	mg/kg	<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	----
Endrin	72-20-8	0.05	mg/kg	<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	----
4.4`-DDD	72-54-8	0.05	mg/kg	<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	----
4.4`-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Methoxychlor	72-43-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
^ Sum of organochlorine pesticides	----	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220530_16_05_SS_Triplicate_ALS	SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220531_00_01_SS_Primary_ALS	SX_OB_20220531_04_08_SS_Primary_ALS	SX_OB_20220530_07_48_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	31-May-2022 00:00	31-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-006	EM2210112-007	EM2210112-008	EM2210112-009	EM2210112-010
				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	----
^ 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	----
^ Chlordane	57-74-9	0.10	mg/kg	<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	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	----	20	mg/kg	<20	<20	<20	<20	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	----
C6 - C10 Fraction	C6_C10	20	mg/kg	<20	<20	<20	<20	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	----
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	mg/kg	<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	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	5.0	µg/kg	<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	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	5.0	µg/kg	<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	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----



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 (Matrix: SOIL)

Sample ID

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Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	31-May-2022 00:00	31-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-006	EM2210112-007	EM2210112-008	EM2210112-009	EM2210112-010
				Result	Result	Result	Result	Result
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	5	µg/kg	<5	<5	<5	<5	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	5.0	µg/kg	<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	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	5.0	µg/kg	<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	----
Perfluorononanoic acid (PFNA)	375-95-1	5.0	µg/kg	<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	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	5.0	µg/kg	<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	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	5.0	µg/kg	<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	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	5.0	µg/kg	<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	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	5.0	µg/kg	<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	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	5.0	µg/kg	<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	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	10.0	µg/kg	<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_20220530_16_05_SS_Triplicate_ALS	SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220531_00_01_SS_Primary_ALS	SX_OB_20220531_04_08_SS_Primary_ALS	SX_OB_20220530_07_48_SS_Primary_ALS
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	31-May-2022 00:00	31-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-006	EM2210112-007	EM2210112-008	EM2210112-009	EM2210112-010
				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	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10.0	µg/kg	<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	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	5.0	µg/kg	<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	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	5.0	µg/kg	<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	----
<b>EP066S: PCB Surrogate</b>								
Decachlorobiphenyl	2051-24-3	0.1	%	93.0	91.4	104	94.9	----
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	74.3	92.9	79.5	95.8	----
Toluene-D8	2037-26-5	0.1	%	55.3	82.8	69.5	86.2	----
4-Bromofluorobenzene	460-00-4	0.1	%	78.3	102	89.3	101	----
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>								
Phenol-d6	13127-88-3	0.025	%	91.6	88.7	97.4	96.2	----
2-Chlorophenol-D4	93951-73-6	0.025	%	104	99.6	112	109	----
2,4,6-Tribromophenol	118-79-6	0.025	%	74.9	63.6	73.5	73.7	----
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>								
Nitrobenzene-D5	4165-60-0	0.025	%	87.4	82.6	94.2	92.3	----
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	87.9	82.2	93.8	91.0	----
2-Fluorobiphenyl	321-60-8	0.025	%	95.3	90.3	102	100	----
Anthracene-d10	1719-06-8	0.025	%	93.0	87.7	99.1	95.8	----
4-Terphenyl-d14	1718-51-0	0.025	%	92.6	87.2	100	95.6	----
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.0002	%	99.4	119	102	110	----
13C8-PFOA	----	0.0002	%	108	109	104	124	----



**Analytical Results**

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220530_07 _49_SS_Duplicate_AL S	SX_OB_20220530_12 _45_SS_Primary_ALS	SX_OB_20220530_12 _55_SS_Primary_ALS	SX_OB_20220530_15 _49_SS_Primary_ALS	SX_OB_20220530_16 _05_SS_Triplicate_AL S
Sampling date / time				30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00	30-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2210112-011	EM2210112-012	EM2210112-013	EM2210112-014	EM2210112-015
				Result	Result	Result	Result	Result
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Final pH	----	0.1	pH Unit	9.1	9.0	9.7	9.3	9.5



**Analytical Results**

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_OB_20220530_20 _08_SS_Primary_ALS	SX_OB_20220531_00 _01_SS_Primary_ALS	SX_OB_20220531_04 _08_SS_Primary_ALS	----	----
Sampling date / time				30-May-2022 00:00	31-May-2022 00:00	31-May-2022 00:00	----	----	
Compound	CAS Number	LOR	Unit	EM2210112-016	EM2210112-017	EM2210112-018	-----	-----	
				Result	Result	Result	----	----	
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>									
Final pH	----	0.1	pH Unit	9.4	9.6	8.8	----	----	



## 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

## QUALITY CONTROL REPORT

<b>Work Order</b>	: <b>EM2210112</b>	<b>Page</b>	: 1 of 27
<b>Client</b>	: <b>AGON ENVIRONMENTAL PTY LTD</b>	<b>Laboratory</b>	: Environmental Division Melbourne
<b>Contact</b>	: Craig Trimbur	<b>Contact</b>	: Josh Alexander
<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>	: +61-3-8549 9600
<b>Project</b>	: JC0927	<b>Date Samples Received</b>	: 31-May-2022
<b>Order number</b>	: ----	<b>Date Analysis Commenced</b>	: 31-May-2022
<b>C-O-C number</b>	: 20220531044306-ALS-52	<b>Issue Date</b>	: 07-Jun-2022
<b>Sampler</b>	: Martha, Will		
<b>Site</b>	: 20220531044306-ALS-52		
<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.

Signatories	Position	Accreditation Category
Andrew Lu	VOC Section Supervisor	Melbourne Inorganics, Springvale, VIC
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, 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: 4375469)</b>									
EM2209872-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	39	41	5.2	0% - 20%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	34	25	29.5	0% - 50%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	15	13	11.4	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	13	12	0.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.0	No Limit
EG005T: Zinc	7440-66-6	5	mg/kg	22	15	35.7	No Limit		
EM2210107-003	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	11	18	53.0	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	6	11	52.9	No Limit
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	8	11	27.8	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	23	35	40.7	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	27	6	125	No Limit
EG005T: Zinc	7440-66-6	5	mg/kg	50	65	25.7	0% - 50%		
<b>EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4375472)</b>									
EM2210196-006	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4375472) - continued</b>									
EM2210196-006	Anonymous	EG005T: Chromium	7440-47-3	2	mg/kg	29	27	8.2	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	12	12	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	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	10	10	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	17	14	19.6	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	30	26	12.3	No Limit
EM2210112-007	SX_OB_20220530_20_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	96	92	3.4	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	150	143	5.1	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	48	54	11.0	0% - 50%
		EG005T: Copper	7440-50-8	5	mg/kg	56	50	11.0	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	95	79	18.4	0% - 50%		
<b>EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4378326)</b>									
EM2210112-001	SX_OB_20220530_07_48_ SS_Primary_ALS	EA001: pH (CaCl2)	----	0.1	pH Unit	7.7	7.7	0.0	0% - 20%
EM2210307-001	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.5	7.4	0.0	0% - 20%
<b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4376877)</b>									
EM2210112-001	SX_OB_20220530_07_48_ SS_Primary_ALS	EA055: Moisture Content	----	0.1	%	29.5	28.1	4.9	0% - 20%
EM2210307-002	Anonymous	EA055: Moisture Content	----	0.1	%	32.7	30.9	5.6	0% - 20%
<b>EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4375470)</b>									
EM2209872-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2210107-003	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: 4375471)</b>									
EM2210196-006	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2210112-007	SX_OB_20220530_20_08_ SS_Primary_ALS	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: 4376616)</b>									
EM2210112-001	SX_OB_20220530_07_48_ SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<1.0	<1.0	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>EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 4376616) - continued</b>									
EM2210178-001	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: 4379209)</b>									
EM2210066-008	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EM2209698-003	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	3	2	0.0	No Limit
<b>EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4379211)</b>									
EM2210216-001	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EM2210157-002	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
<b>EK040T: Fluoride Total (QC Lot: 4376626)</b>									
EM2210112-001	SX_OB_20220530_07_48_ SS_Primary_ALS	EK040T: Fluoride	16984-48-8	40	mg/kg	160	160	0.0	No Limit
EM2210307-001	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	150	170	14.1	No Limit
<b>EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4375441)</b>									
EM2209698-003	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	0.1	0.1	0.0	No Limit
EM2210112-005	SX_OB_20220530_15_49_ SS_Primary_ALS	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4371317)</b>									
EM2210112-001	SX_OB_20220530_07_48_ 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: 4371317)</b>									
EM2210112-001	SX_OB_20220530_07_48_ 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: 4371317)</b>									
EM2210112-001	SX_OB_20220530_07_48_ 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





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: 4371317) - continued</b>									
EM2210112-001	SX_OB_20220530_07_48_ SS_Primary_ALS	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: 4375443)</b>									
EM2209698-003	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-9 0-2	0.05	mg/kg	<0.06	<0.06	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EM2210112-005	SX_OB_20220530_15_49_ 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	4901-51-3/58-9 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: 4375443)</b>									
EM2209698-003	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



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: 4375443) - continued</b>									
EM2209698-003	Anonymous	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
EM2210112-005	SX_OB_20220530_15_49_ 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
EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<20	<20	0.0	No Limit		
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4375443)</b>									
EM2209698-003	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	2.2	0.6	108	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	0.7	<0.5	29.5	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	4.8	1.6	101	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	4.9	1.7	98.6	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	2.4	1.0	82.6	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	2.4	0.9	86.2	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	2.8	1.2	79.5	No Limit
		EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	1.6	0.7	73.6	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	2.0	0.9	72.8	No Limit
		EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	4.4	1.9	76.5	No Limit
EM2210112-005	SX_OB_20220530_15_49_ 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		



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: 4375443) - continued</b>									
EM2210112-005	SX_OB_20220530_15_49_ SS_Primary_ALS	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: 4375443)</b>									
EM2209698-003	Anonymous	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4,4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EM2210112-005	SX_OB_20220530_15_49_ 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		



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: 4375443) - continued</b>									
EM2210112-005	SX_OB_20220530_15_49_ SS_Primary_ALS	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: 4371317)</b>									
EM2210112-001	SX_OB_20220530_07_48_ 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: 4375442)</b>									
EM2209698-003	Anonymous	EP071-EM: C15 - C28 Fraction	----	100	mg/kg	210	180	14.4	No Limit
		EP071-EM: C29 - C36 Fraction	----	100	mg/kg	190	340	59.4	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	400	520	26.1	0% - 50%
EM2210112-005	SX_OB_20220530_15_49_ 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
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4371317)</b>									
EM2210112-001	SX_OB_20220530_07_48_ 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: 4375442)</b>									
EM2209698-003	Anonymous	EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	360	440	19.7	No Limit
		EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	120	380	101	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	480	# 820	52.3	0% - 50%
EM2210112-005	SX_OB_20220530_15_49_ 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
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4377673)</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>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4377673) - continued</b>									
EM2209709-005	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
EM2210112-009	SX_OB_20220531_04_08_ 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: 4377673)</b>									
EM2209709-005	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
		EM2210112-009	SX_OB_20220531_04_08_ SS_Primary_ALS	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050
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: 4377673)</b>									
EM2209709-005	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4377673) - continued</b>									
EM2209709-005	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2210112-009	SX_OB_20220531_04_08_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: 4377673)</b>									
EM2209709-005	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
EM2210112-009	SX_OB_20220531_04_08_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



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: 4377673) - continued</b>									
EM2210112-009	SX_OB_20220531_04_08_SS_Primary_ALS	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: 4377673)</b>									
EM2209709-005	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
EM2210112-009	SX_OB_20220531_04_08_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: 4381307)</b>									
EM2209858-001	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	0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2210307-006	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
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4381323)</b>									
EM2209858-007	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: 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
EM2210307-016	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



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: 4381307)</b>									
EM2209858-001	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
EM2210307-006	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
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4381323)</b>									
EM2209858-007	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		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
EM2210307-016	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<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: 4381323) - continued</b>									
EM2210307-016	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>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4381307)</b>									
EM2209858-001	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
EM2210307-006	Anonymous	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: 4381323)</b>									
EM2209858-007	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit



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: 4381323) - continued</b>									
EM2209858-007	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2210307-016	Anonymous	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>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4381307)</b>									
EM2209858-001	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
EM2210307-006	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
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4381323)</b>									
EM2209858-007	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit



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: 4381323) - continued</b>									
EM2209858-007	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
EM2210307-016	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<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: 4381307)</b>									
EM2209858-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.02	0.03	40.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.01	0.02	66.7	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	0.02	0.03	40.0	No Limit
EM2210307-006	Anonymous	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: 4381323)</b>									
EM2209858-007	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2210307-016	Anonymous	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



## 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: 4375469)</b>									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	98.8	70.0	130	
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	59.9	50.0	130	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	98.3	70.0	130	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	96.1	70.0	130	
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	94.6	70.0	130	
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	84.7	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	75.7	70.0	130	
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	82.5	70.0	130	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	76.3	70.0	130	
<b>EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4375472)</b>									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	99.5	70.0	130	
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	63.9	50.0	130	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	99.6	70.0	130	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	95.8	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	78.4	70.0	130	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	96.6	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	76.1	70.0	130	
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	73.0	70.0	130	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	76.4	70.0	130	
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4376791)</b>									
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.1	----	----	----	----	
<b>EA001: pH in soil using 0.01M CaCl extract (QCLot: 4378326)</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: 4375470)</b>									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	126	70.0	130	
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4375471)</b>									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	124	70.0	130	
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4376616)</b>									
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	77.9	70.0	130	



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>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4379209)</b>									
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	82.4	70.0	130	
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4379211)</b>									
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	95.4	70.0	130	
<b>EK040T: Fluoride Total (QCLot: 4376626)</b>									
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	82.9	75.2	110	
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4375441)</b>									
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	119	67.4	136	
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4371317)</b>									
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	96.2	69.2	116	
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	96.6	67.7	116	
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	91.9	66.6	115	
EP074-UT: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	4.2 mg/kg	90.4	65.2	112	
	106-42-3								
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	93.5	69.4	111	
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	93.2	68.4	110	
<b>EP074H: Naphthalene (QCLot: 4371317)</b>									
EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	0.6 mg/kg	92.0	72.3	114	
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4371317)</b>									
EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	109	47.0	138	
EP074-UT: 1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	97.9	57.6	125	
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	100	72.3	115	
EP074-UT: trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	95.7	60.5	122	
EP074-UT: cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	96.3	70.3	112	
EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	97.9	66.6	115	
EP074-UT: 1,1,1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	96.4	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	114	72.9	114	
EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	95.6	64.7	115	
EP074-UT: 1,1,1,2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	105	72.6	116	
EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	89.4	60.0	119	
EP074-UT: 1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	94.2	71.8	116	
EP074-UT: 1,1,1,2,2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	101	66.1	116	
EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	91.4	39.8	128	
EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	96.6	70.3	113	
EP074-UT: 1,4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	92.2	62.6	113	
EP074-UT: 1,2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	95.0	70.8	110	
EP074-UT: 1,2,4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	84.0	48.4	120	
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4375443)</b>									



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>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4375443) - continued</b>									
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	103	74.5	126	
EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	109	72.7	126	
EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	111	73.5	132	
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	111	72.8	128	
EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	2 mg/kg	109	73.3	134	
EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	2 mg/kg	106	72.4	128	
EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	99.8	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	103	71.9	128	
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	90.2	54.4	135	
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4375443)</b>									
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	108	71.5	130	
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	111	73.4	129	
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	108	74.3	129	
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	107	70.9	133	
EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	112	71.8	132	
EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	75.3	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	82.8	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	84.0	62.0	128	
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	66.5	34.5	137	
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4375443)</b>									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	110	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	111	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	110	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	113	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	112	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	112	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	112	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	116	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	116	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	116	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	117	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	115	65.1	130	
EP075-EM: Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	112	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	112	72.9	135	
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	110	71.3	134	
<b>EP075I: Organochlorine Pesticides (QCLot: 4375443)</b>									



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: 4375443) - continued</b>									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	104	71.0	129	
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	105	74.8	126	
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	106	75.7	130	
EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	2 mg/kg	106	70.8	130	
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	109	76.5	134	
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	107	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	106	76.8	130	
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	105	73.6	130	
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	109	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	106	75.3	131	
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	101	69.4	134	
EP075-EM: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	109	71.0	132	
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	109	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	108	55.7	145	
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	113	71.4	135	
EP075-EM: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	114	74.8	134	
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	110	70.2	135	
EP075-EM: 4,4`-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	108	77.7	133	
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	110	63.6	135	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4371317)</b>									
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	91.3	61.1	119	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4375442)</b>									
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	670 mg/kg	115	74.4	129	
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	2860 mg/kg	110	81.0	123	
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1490 mg/kg	101	81.8	121	
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5020 mg/kg	108	70.0	130	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4371317)</b>									
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	88.7	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: 4375442)</b>									
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1000 mg/kg	116	75.4	132	
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	3770 mg/kg	112	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	250 mg/kg	110	73.3	136	
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5020 mg/kg	113	70.0	130	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4377673)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	93.6	72.0	128	



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>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4377673) - continued</b>									
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	104	73.0	123	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	80.2	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	106	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	108	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	119	59.0	134	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4377673)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	102	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.6	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	112	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	69.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.7	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	105	69.0	133	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4377673)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	98.4	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	116	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	94.8	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	121	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	61.0	139	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4377673)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	107	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	122	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	119	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	82.6	70.0	130	
<b>EP231P: PFAS Sums (QCLot: 4377673)</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 Blank (MB) Report	Laboratory Control Spike (LCS) Report				
Method: Compound	CAS Number	LOR	Unit		Result	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)
				LCS			Low	High	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4381307)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	98.0	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	102	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	100	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	95.1	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	106	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	103	53.0	142	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4381323)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	101	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	96.5	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	100	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	98.8	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	106	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	98.5	53.0	142	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4381307)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	96.1	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	96.7	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	104	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.1	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	104	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	109	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	90.3	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	98.5	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	96.0	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	107	71.0	132	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4381323)</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	102	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	105	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	104	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	103	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	104	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	102	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	89.1	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	92.7	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	88.2	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	102	71.0	132	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381307)</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>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381307) - continued</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	99.9	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	108	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	88.5	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	111	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	88.2	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	96.1	61.0	135	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381323)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	98.0	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	106	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	96.3	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	101	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	96.6	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	103	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	94.5	61.0	135	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4381307)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	100	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	104	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	99.0	67.0	138	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	92.1	70.0	130	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4381323)</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	109	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	122	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	100	70.0	130	
<b>EP231P: PFAS Sums (QCLot: 4381307)</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: 4381323)</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
<b>EP231P: PFAS Sums (QCLot: 4381323) - continued</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	Low	High
<b>EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4375469)</b>							
EM2209872-004	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	89.8	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	87.6	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	95.9	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	94.2	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	89.8	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	86.8	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	# 78.9	80.0	120
<b>EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4375472)</b>							
EM2210112-008	SX_OB_20220531_00_01_SS_Primary_ALS	EG005T: Cadmium	7440-43-9	50 mg/kg	87.6	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	80.0	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	97.7	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	88.8	80.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	# 78.8	80.0	120
EM2210112-008	SX_OB_20220531_00_01_SS_Primary_ALS	EG005T: Arsenic	7440-38-2	50 mg/kg	123	78.0	124
		EG005T: Nickel	7440-02-0	50 mg/kg	103	78.0	120
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4375470)</b>							
EM2209872-004	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	97.8	76.0	116
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4375471)</b>							
EM2210112-008	SX_OB_20220531_00_01_SS_Primary_ALS	EG035T: Mercury	7439-97-6	0.5 mg/kg	97.2	76.0	116
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4376616)</b>							
EM2210112-002	SX_OB_20220530_07_49_SS_Duplicate_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	80.4	58.0	114
EM2210112-002	SX_OB_20220530_07_49_SS_Duplicate_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	97.8	58.0	114
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4379209)</b>							
EM2209698-004	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	93.6	70.0	130



Sub-Matrix: SOIL

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4379211)</b>							
EM2210157-002	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	92.4	70.0	130
<b>EK040T: Fluoride Total (QCLot: 4376626)</b>							
EM2210112-002	SX_OB_20220530_07_49_SS_Duplicate_ALS	EK040T: Fluoride	16984-48-8	400 mg/kg	70.9	70.0	130
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4375441)</b>							
EM2209698-004	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	124	59.6	152
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4371317)</b>							
EM2210112-002	SX_OB_20220530_07_49_SS_Duplicate_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	77.9	53.7	130
		EP074-UT: Toluene	108-88-3	2 mg/kg	83.4	55.1	124
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4371317)</b>							
EM2210112-002	SX_OB_20220530_07_49_SS_Duplicate_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	65.3	38.4	145
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	73.2	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	76.2	55.5	122
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4375443)</b>							
EM2209858-002	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	90.6	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	95.4	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	43.9	10.0	144
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4375443)</b>							
EM2209858-002	Anonymous	EP075-EM: Phenol	108-95-2	3 mg/kg	91.8	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	69.2	34.2	129
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4375443)</b>							
EM2209858-002	Anonymous	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	89.6	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	92.1	37.8	152
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4371317)</b>							
EM2210112-002	SX_OB_20220530_07_49_SS_Duplicate_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	70.8	42.3	111
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4375442)</b>							
EM2209858-001	Anonymous	EP071-EM: C10 - C14 Fraction	----	670 mg/kg	112	71.3	126
		EP071-EM: C15 - C28 Fraction	----	2860 mg/kg	111	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1490 mg/kg	102	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	5020 mg/kg	108	70.0	130
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4371317)</b>							
EM2210112-002	SX_OB_20220530_07_49_SS_Duplicate_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	67.5	39.9	109
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4375442)</b>							
EM2209858-001	Anonymous	EP071-EM: >C10 - C16 Fraction	----	1000 mg/kg	114	71.5	130
		EP071-EM: >C16 - C34 Fraction	----	3770 mg/kg	113	76.9	119
		EP071-EM: >C34 - C40 Fraction	----	250 mg/kg	115	65.3	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>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4375442) - continued</b>							
EM2209858-001	Anonymous	EP071-EM: >C10 - C40 Fraction (sum)	----	5020 mg/kg	113	70.0	130
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4377673)</b>							
EM2209709-012	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	97.1	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	93.4	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	88.2	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	114	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	94.3	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	102	59.0	134
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4377673)</b>							
EM2209709-012	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	96.9	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	85.9	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	104	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	108	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	96.9	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	102	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	94.8	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	94.0	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	104	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.00125 mg/kg	94.2	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	111	69.0	133
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4377673)</b>							
EM2209709-012	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	93.3	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	88.4	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	104	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	97.5	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	89.0	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	114	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	114	61.0	139
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4377673)</b>							
EM2209709-012	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	114	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	110	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	114	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	102	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: 4381307)</b>							
EM2209858-002	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	95.1	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	99.0	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHps)	375-92-8	0.238 µg/L	102	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	110	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	99.4	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4381323)</b>							
EM2209858-008	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	96.6	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	95.6	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	110	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	90.1	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	76.4	53.0	142
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4381307)</b>							
EM2209858-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	128	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	106	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	99.3	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	105	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	102	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	107	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	107	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	93.8	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	93.6	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	83.1	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	104	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4381323)</b>							
EM2209858-008	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	77.3	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	93.6	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	97.5	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	101	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	104	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	101	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	88.0	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	84.5	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	78.7	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	76.8	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	74.8	71.0	132
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381307)</b>							



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>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381307) - continued</b>							
EM2209858-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	101	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	101	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	98.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	105	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	106	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	100	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381323)</b>							
EM2209858-008	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	96.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	87.2	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	80.6	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	86.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	83.3	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	75.0	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	73.7	61.0	135
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4381307)</b>							
EM2209858-002	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	119	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	113	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	98.9	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4381323)</b>							
EM2209858-008	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	102	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	104	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	94.8	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	# 60.6	70.0	130

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

Work Order	: EM2210112	Page	: 1 of 14
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: Craig Trimbur	Telephone	: +61-3-8549 9600
Project	: JC0927	Date Samples Received	: 31-May-2022
Site	: 20220531044306-ALS-52	Issue Date	: 07-Jun-2022
Sampler	: Martha, Will	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** Laboratory Control outliers occur.
- Duplicate outliers exist - please see following pages for full details.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, **NO** surrogate recovery outliers occur.

#### Outliers : Analysis Holding Time Compliance

- **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>Duplicate (DUP) RPDs</b>							
EP080/071: Total Recoverable Hydrocarbons - NEPM 2	EM2209698--003	Anonymous	>C10 - C40 Fraction (sum)	----	52.3 %	0% - 50%	RPD exceeds LOR based limits
<b>Matrix Spike (MS) Recoveries</b>							
EG005(ED093)T: Total Metals by ICP-AES	EM2209872--004	Anonymous	Zinc	7440-66-6	78.9 %	80.0-120%	Recovery less than lower data quality objective
EG005(ED093)T: Total Metals by ICP-AES	EM2210112--008	SX_OB_20220531_00_01_SS	Zinc	7440-66-6	78.8 %	80.0-120%	Recovery less than lower data quality objective

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	EM2209858--008	Anonymous	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	60.6 %	70.0-130%	Recovery less than lower data quality objective

### Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method	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>Miscellaneous Plastic Bucket (EA001)</b>								
SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	06-Jun-2022	✓	03-Jun-2022	03-Jun-2022	✓
<b>Miscellaneous Plastic Bucket (EA001)</b>								
SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	07-Jun-2022	✓	03-Jun-2022	03-Jun-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>EA055: Moisture Content (Dried @ 105-110°C)</b>								
<b>Miscellaneous Plastic Bucket (EA055)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	----	----	----	02-Jun-2022	13-Jun-2022	✓
<b>Miscellaneous Plastic Bucket (EA055)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	----	----	----	02-Jun-2022	14-Jun-2022	✓
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
<b>Miscellaneous Plastic Bucket (EG005T)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	26-Nov-2022	✓	04-Jun-2022	26-Nov-2022	✓
<b>Miscellaneous Plastic Bucket (EG005T)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	04-Jun-2022	27-Nov-2022	✓
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
<b>Miscellaneous Plastic Bucket (EG035T)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	27-Jun-2022	✓	04-Jun-2022	27-Jun-2022	✓
<b>Miscellaneous Plastic Bucket (EG035T)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	28-Jun-2022	✓	04-Jun-2022	28-Jun-2022	✓
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>								
<b>Miscellaneous Plastic Bucket (EG048G)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	27-Jun-2022	✓	04-Jun-2022	10-Jun-2022	✓
<b>Miscellaneous Plastic Bucket (EG048G)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	28-Jun-2022	✓	04-Jun-2022	10-Jun-2022	✓
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
<b>Miscellaneous Plastic Bucket (EK026SF)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	13-Jun-2022	✓	06-Jun-2022	17-Jun-2022	✓
<b>Miscellaneous Plastic Bucket (EK026SF)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	06-Jun-2022	17-Jun-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>EK040T: Fluoride Total</b>								
<b>Miscellaneous Plastic Bucket (EK040T)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	27-Jun-2022	✓	07-Jun-2022	27-Jun-2022	✓
<b>Miscellaneous Plastic Bucket (EK040T)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	28-Jun-2022	✓	07-Jun-2022	28-Jun-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_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	02-Jun-2022	26-Nov-2022	✓	----	----	----
<b>Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	02-Jun-2022	27-Nov-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_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	02-Jun-2022	26-Nov-2022	✓	----	----	----
<b>Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	02-Jun-2022	27-Nov-2022	✓	----	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
<b>Miscellaneous Plastic Bucket (EP066-EM)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	13-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>Miscellaneous Plastic Bucket (EP066-EM)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>								
<b>Miscellaneous Plastic Bucket (EP074-UT)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	31-May-2022	06-Jun-2022	✓	01-Jun-2022	06-Jun-2022	✓
<b>Miscellaneous Plastic Bucket (EP074-UT)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	31-May-2022	07-Jun-2022	✓	01-Jun-2022	07-Jun-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>EP074H: Naphthalene</b>								
<b>Miscellaneous Plastic Bucket (EP074-UT)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	31-May-2022	06-Jun-2022	✓	01-Jun-2022	06-Jun-2022	✓
<b>Miscellaneous Plastic Bucket (EP074-UT)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	31-May-2022	07-Jun-2022	✓	01-Jun-2022	07-Jun-2022	✓
<b>EP074I: Volatile Halogenated Compounds</b>								
<b>Miscellaneous Plastic Bucket (EP074-UT)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	31-May-2022	06-Jun-2022	✓	01-Jun-2022	06-Jun-2022	✓
<b>Miscellaneous Plastic Bucket (EP074-UT)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	31-May-2022	07-Jun-2022	✓	01-Jun-2022	07-Jun-2022	✓
<b>EP075A: Phenolic Compounds (Halogenated)</b>								
<b>Miscellaneous Plastic Bucket (EP075-EM)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	13-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>Miscellaneous Plastic Bucket (EP075-EM)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
<b>Miscellaneous Plastic Bucket (EP075-EM)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	13-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>Miscellaneous Plastic Bucket (EP075-EM)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
<b>Miscellaneous Plastic Bucket (EP075-EM)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	13-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>Miscellaneous Plastic Bucket (EP075-EM)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	03-Jun-2022	13-Jul-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>Miscellaneous Plastic Bucket (EP075-EM)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	13-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>Miscellaneous Plastic Bucket (EP075-EM)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
<b>Miscellaneous Plastic Bucket (EP071-EM)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	13-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>Miscellaneous Plastic Bucket (EP074-UT)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	31-May-2022	06-Jun-2022	✓	01-Jun-2022	06-Jun-2022	✓
<b>Miscellaneous Plastic Bucket (EP071-EM)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>Miscellaneous Plastic Bucket (EP074-UT)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	31-May-2022	07-Jun-2022	✓	01-Jun-2022	07-Jun-2022	✓
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
<b>Miscellaneous Plastic Bucket (EP071-EM)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	13-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>Miscellaneous Plastic Bucket (EP074-UT)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	31-May-2022	06-Jun-2022	✓	01-Jun-2022	06-Jun-2022	✓
<b>Miscellaneous Plastic Bucket (EP071-EM)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>Miscellaneous Plastic Bucket (EP074-UT)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	31-May-2022	07-Jun-2022	✓	01-Jun-2022	07-Jun-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>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
<b>Miscellaneous Plastic Bucket (EP231X)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	26-Nov-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>Miscellaneous Plastic Bucket (EP231X)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>Miscellaneous Plastic Bucket (EP231X)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	26-Nov-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>Miscellaneous Plastic Bucket (EP231X)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
<b>Miscellaneous Plastic Bucket (EP231X)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	26-Nov-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>Miscellaneous Plastic Bucket (EP231X)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
<b>Miscellaneous Plastic Bucket (EP231X)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	26-Nov-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>Miscellaneous Plastic Bucket (EP231X)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>EP231P: PFAS Sums</b>								
<b>Miscellaneous Plastic Bucket (EP231X)</b> SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS,	30-May-2022	03-Jun-2022	26-Nov-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>Miscellaneous Plastic Bucket (EP231X)</b> SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220531_04_08_SS_Primary_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	13-Jul-2022	✓

Matrix: **WATER**

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



Matrix: WATER

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
<b>HDPE (no PTFE) (EP231X)</b>								
SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS, SX_OB_20220531_04_08_SS_Primary_ALS, SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS, SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS, SX_OB_20220531_00_01_SS_Primary_ALS, SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS, SX_OB_20220531_04_08_SS_Primary_ALS	02-Jun-2022	06-Jun-2022	29-Nov-2022	✓	06-Jun-2022	29-Nov-2022	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>HDPE (no PTFE) (EP231X)</b>								
SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS, SX_OB_20220531_04_08_SS_Primary_ALS, SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS, SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS, SX_OB_20220531_00_01_SS_Primary_ALS, SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS, SX_OB_20220531_04_08_SS_Primary_ALS	02-Jun-2022	06-Jun-2022	29-Nov-2022	✓	06-Jun-2022	29-Nov-2022	✓
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
<b>HDPE (no PTFE) (EP231X)</b>								
SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS, SX_OB_20220531_04_08_SS_Primary_ALS, SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS, SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS, SX_OB_20220531_00_01_SS_Primary_ALS, SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS, SX_OB_20220531_04_08_SS_Primary_ALS	02-Jun-2022	06-Jun-2022	29-Nov-2022	✓	06-Jun-2022	29-Nov-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)</b>								
SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS, SX_OB_20220531_04_08_SS_Primary_ALS, SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS, SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS, SX_OB_20220531_00_01_SS_Primary_ALS, SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS, SX_OB_20220531_04_08_SS_Primary_ALS	02-Jun-2022	06-Jun-2022	29-Nov-2022	✓	06-Jun-2022	29-Nov-2022	✓
<b>EP231P: PFAS Sums</b>								
<b>HDPE (no PTFE) (EP231X)</b>								
SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS, SX_OB_20220531_04_08_SS_Primary_ALS, SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS, SX_OB_20220531_00_01_SS_Primary_ALS,	SX_OB_20220530_07_49_SS_Duplicate_ALS, SX_OB_20220530_12_55_SS_Primary_ALS, SX_OB_20220530_16_05_SS_Triplicate_ALS, SX_OB_20220531_00_01_SS_Primary_ALS, SX_OB_20220530_07_48_SS_Primary_ALS, SX_OB_20220530_12_45_SS_Primary_ALS, SX_OB_20220530_15_49_SS_Primary_ALS, SX_OB_20220530_20_08_SS_Primary_ALS, SX_OB_20220531_04_08_SS_Primary_ALS	02-Jun-2022	06-Jun-2022	29-Nov-2022	✓	06-Jun-2022	29-Nov-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>Analytical Methods</b>							
<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	2	17	11.76	10.00	✔	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	16	12.50	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
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	3	16	18.75	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	4	40	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	17	11.76	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	31	12.90	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	40	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	2	16	12.50	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	9	11.11	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	16	6.25	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	16	6.25	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	40	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	17	5.88	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	31	6.45	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	16	6.25	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	9	11.11	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	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	16	6.25	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	16	6.25	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	40	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	17	5.88	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	31	6.45	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	16	6.25	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	9	11.11	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	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	16	6.25	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	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	31	6.45	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	40	7.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard

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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	38	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	38	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	38	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	38	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard



## Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
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.

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.
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.



<i>Preparation Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
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.



## CERTIFICATE OF ANALYSIS

**Work Order** : **EM2210307**  
**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** : 20220601043926-ALS-8  
**Sampler** : TG+WOH+AGON  
**Site** : 20220601043926-ALS-8  
**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** : Josh Alexander  
**Address** : 4 Westall Rd Springvale VIC Australia 3171  
  
**Telephone** : +61-3-8549 9600  
**Date Samples Received** : 01-Jun-2022 11:25  
**Date Analysis Commenced** : 02-Jun-2022  
**Issue Date** : 07-Jun-2022 17:45



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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

### Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Andrew Lu	VOC Section Supervisor	Melbourne Inorganics, Springvale, VIC
Andrew Lu	VOC Section Supervisor	Melbourne Organics, Springvale, VIC
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
Jarwis Nheu	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument 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 Contract for details.

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

- EG048G: EM2210307 #7 and #8 result for hexavalent chromium has been confirmed by re-preparation and re-analysis.
- 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_OB_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS	SX_OB_20220531_12_17_SS_Primary_ALS	SX_OB_20220531_16_01_SS_Primary_ALS	SX_OB_20220531_16_09_SS_Triplicate_ALS
Sampling date / time				31-May-2022 08:13	31-May-2022 08:15	31-May-2022 12:17	31-May-2022 16:01	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-001	EM2210307-002	EM2210307-003	EM2210307-004	EM2210307-005
				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_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS	SX_OB_20220531_12_17_SS_Primary_ALS	SX_OB_20220531_16_01_SS_Primary_ALS	SX_OB_20220531_16_09_SS_Triplicate_ALS
Sampling date / time				31-May-2022 08:13	31-May-2022 08:15	31-May-2022 12:17	31-May-2022 16:01	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-001	EM2210307-002	EM2210307-003	EM2210307-004	EM2210307-005
				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	%	108	105	111	115	93.4
13C8-PFOA	----	0.02	%	101	99.4	100	110	94.4



## Analytical Results

Sub-Matrix: ASLP LEACHATE (Matrix: WATER)				Sample ID	SX_IB_20220531_20_29_SS_Primary_ALS	SX_IB_20220531_23_47_SS_Primary_ALS	SX_IB_20220601_03_51_SS_Primary_ALS	----	----
Sampling date / time				31-May-2022 20:29	31-May-2022 23:47	31-May-2022 03:51	----	----	
Compound	CAS Number	LOR	Unit	EM2210307-006	EM2210307-007	EM2210307-008	-----	-----	
				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_IB_20220531_20_29_SS_Primary_ALS	SX_IB_20220531_23_47_SS_Primary_ALS	SX_IB_20220601_03_51_SS_Primary_ALS	----	----
				31-May-2022 20:29	31-May-2022 23:47	31-May-2022 03:51	----	----
Compound	CAS Number	LOR	Unit	EM2210307-006	EM2210307-007	EM2210307-008	-----	-----
				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	%	119	101	93.6	----	----
13C8-PFOA	----	0.02	%	113	101	90.3	----	----



## Analytical Results

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

Sample ID

				SX_OB_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS	SX_OB_20220531_12_17_SS_Primary_ALS	SX_OB_20220531_16_01_SS_Primary_ALS	SX_OB_20220531_16_09_SS_Triplicate_ALS
Sampling date / time				31-May-2022 08:13	31-May-2022 08:15	31-May-2022 12:17	31-May-2022 16:01	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-011	EM2210307-012	EM2210307-013	EM2210307-014	EM2210307-015
				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 (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<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_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS	SX_OB_20220531_12_17_SS_Primary_ALS	SX_OB_20220531_16_01_SS_Primary_ALS	SX_OB_20220531_16_09_SS_Triplicate_ALS
Sampling date / time				31-May-2022 08:13	31-May-2022 08:15	31-May-2022 12:17	31-May-2022 16:01	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-011	EM2210307-012	EM2210307-013	EM2210307-014	EM2210307-015
				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	%	96.5	98.6	97.1	107	100
13C8-PFOA	----	0.02	%	99.2	90.2	92.3	92.5	92.5



## Analytical Results

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

Sample ID

				SX_IB_20220531_20_29_SS_Primary_ALS	SX_IB_20220531_23_47_SS_Primary_ALS	SX_IB_20220601_03_51_SS_Primary_ALS	----	----
		Sampling date / time		31-May-2022 20:29	31-May-2022 23:47	31-May-2022 03:51	----	----
Compound	CAS Number	LOR	Unit	EM2210307-016	EM2210307-017	EM2210307-018	-----	-----
				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_IB_20220531_20_29_SS_Primary_ALS	SX_IB_20220531_23_47_SS_Primary_ALS	SX_IB_20220601_03_51_SS_Primary_ALS	----	----
				31-May-2022 20:29	31-May-2022 23:47	31-May-2022 03:51	----	----
Compound	CAS Number	LOR	Unit	EM2210307-016	EM2210307-017	EM2210307-018	-----	-----
				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	%	106	91.2	95.7	----	----
13C8-PFOA	----	0.02	%	91.3	95.5	85.4	----	----





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS	SX_OB_20220531_12_17_SS_Primary_ALS	SX_OB_20220531_16_01_SS_Primary_ALS	SX_OB_20220531_16_09_SS_Triplicate_ALS
Sampling date / time				31-May-2022 08:13	31-May-2022 08:15	31-May-2022 12:17	31-May-2022 16:01	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-001	EM2210307-002	EM2210307-003	EM2210307-004	EM2210307-005
				Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
pH (CaCl2)	----	0.1	pH Unit	7.5	7.6	7.6	7.7	7.9
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	32.0	32.7	31.4	30.4	28.4
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	59	64	49	73	38
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	5	mg/kg	76	82	80	88	65
Copper	7440-50-8	5	mg/kg	25	37	40	61	42
Lead	7439-92-1	5	mg/kg	7	6	6	<5	<5
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	<5	<5
Nickel	7440-02-0	5	mg/kg	46	48	76	128	121
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	27	28	51	75	59
<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	150	180	150	180	200
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Initial pH	----	0.1	pH Unit	8.4	8.5	8.1	8.7	8.8
After HCl pH	----	0.1	pH Unit	1.0	1.0	1.0	1.0	1.0
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	5.0	5.0
Final pH	----	0.1	pH Unit	5.0	5.0	5.0	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_OB_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS	SX_OB_20220531_12_17_SS_Primary_ALS	SX_OB_20220531_16_01_SS_Primary_ALS	SX_OB_20220531_16_09_SS_Triplicate_ALS
Sampling date / time				31-May-2022 08:13	31-May-2022 08:15	31-May-2022 12:17	31-May-2022 16:01	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-001	EM2210307-002	EM2210307-003	EM2210307-004	EM2210307-005
				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_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS	SX_OB_20220531_12_17_SS_Primary_ALS	SX_OB_20220531_16_01_SS_Primary_ALS	SX_OB_20220531_16_09_SS_Triplicate_ALS
Sampling date / time				31-May-2022 08:13	31-May-2022 08:15	31-May-2022 12:17	31-May-2022 16:01	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-001	EM2210307-002	EM2210307-003	EM2210307-004	EM2210307-005
				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_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS	SX_OB_20220531_12_17_SS_Primary_ALS	SX_OB_20220531_16_01_SS_Primary_ALS	SX_OB_20220531_16_09_SS_Triplicate_ALS
Sampling date / time				31-May-2022 08:13	31-May-2022 08:15	31-May-2022 12:17	31-May-2022 16:01	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-001	EM2210307-002	EM2210307-003	EM2210307-004	EM2210307-005
				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_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS	SX_OB_20220531_12_17_SS_Primary_ALS	SX_OB_20220531_16_01_SS_Primary_ALS	SX_OB_20220531_16_09_SS_Triplicate_ALS
Sampling date / time				31-May-2022 08:13	31-May-2022 08:15	31-May-2022 12:17	31-May-2022 16:01	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-001	EM2210307-002	EM2210307-003	EM2210307-004	EM2210307-005
				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_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS	SX_OB_20220531_12_17_SS_Primary_ALS	SX_OB_20220531_16_01_SS_Primary_ALS	SX_OB_20220531_16_09_SS_Triplicate_ALS
Sampling date / time				31-May-2022 08:13	31-May-2022 08:15	31-May-2022 12:17	31-May-2022 16:01	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-001	EM2210307-002	EM2210307-003	EM2210307-004	EM2210307-005
				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_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS	SX_OB_20220531_12_17_SS_Primary_ALS	SX_OB_20220531_16_01_SS_Primary_ALS	SX_OB_20220531_16_09_SS_Triplicate_ALS
Sampling date / time				31-May-2022 08:13	31-May-2022 08:15	31-May-2022 12:17	31-May-2022 16:01	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-001	EM2210307-002	EM2210307-003	EM2210307-004	EM2210307-005
				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	%	102	99.5	102	103	103
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	73.2	97.9	79.4	91.7	92.2
Toluene-D8	2037-26-5	0.1	%	64.9	92.7	74.1	84.3	82.9
4-Bromofluorobenzene	460-00-4	0.1	%	81.8	105	92.3	103	103
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>								
Phenol-d6	13127-88-3	0.025	%	104	100	103	108	103
2-Chlorophenol-D4	93951-73-6	0.025	%	121	115	120	124	119
2,4,6-Tribromophenol	118-79-6	0.025	%	97.1	93.7	98.1	101	97.9
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>								
Nitrobenzene-D5	4165-60-0	0.025	%	99.4	95.7	99.2	102	99.2
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	99.3	95.3	97.9	101	96.8
2-Fluorobiphenyl	321-60-8	0.025	%	107	103	106	109	105
Anthracene-d10	1719-06-8	0.025	%	104	99.8	103	106	102
4-Terphenyl-d14	1718-51-0	0.025	%	111	105	109	113	110
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.0002	%	108	118	108	107	113
13C8-PFOA	----	0.0002	%	106	112	110	108	116



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_IB_20220531_20_29_SS_Primary_ALS	SX_IB_20220531_23_47_SS_Primary_ALS	SX_IB_20220601_03_51_SS_Primary_ALS	SX_OB_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS
Sampling date / time				31-May-2022 20:29	31-May-2022 23:47	31-May-2022 03:51	31-May-2022 08:13	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-006	EM2210307-007	EM2210307-008	EM2210307-011	EM2210307-012
				Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
pH (CaCl2)	----	0.1	pH Unit	7.7	7.7	7.7	----	----
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	23.8	28.4	25.6	----	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	23	20	24	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	----
Chromium	7440-47-3	5	mg/kg	92	109	116	----	----
Copper	7440-50-8	5	mg/kg	53	52	59	----	----
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	172	148	158	----	----
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	78	78	88	----	----
<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	1.1	1.5	----	----
<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	200	210	200	----	----
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Initial pH	----	0.1	pH Unit	9.5	9.5	9.5	----	----
After HCl pH	----	0.1	pH Unit	1.0	1.0	1.1	----	----
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	----	----	----	8.4	8.7
<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)

Sample ID

				SX_IB_20220531_20_29_SS_Primary_ALS	SX_IB_20220531_23_47_SS_Primary_ALS	SX_IB_20220601_03_51_SS_Primary_ALS	SX_OB_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS
Sampling date / time				31-May-2022 20:29	31-May-2022 23:47	31-May-2022 03:51	31-May-2022 08:13	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-006	EM2210307-007	EM2210307-008	EM2210307-011	EM2210307-012
				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

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_IB_20220531_20_29_SS_Primary_ALS	SX_IB_20220531_23_47_SS_Primary_ALS	SX_IB_20220601_03_51_SS_Primary_ALS	SX_OB_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS
Sampling date / time				31-May-2022 20:29	31-May-2022 23:47	31-May-2022 03:51	31-May-2022 08:13	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-006	EM2210307-007	EM2210307-008	EM2210307-011	EM2210307-012
				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

				SX_IB_20220531_20_29_SS_Primary_ALS	SX_IB_20220531_23_47_SS_Primary_ALS	SX_IB_20220601_03_51_SS_Primary_ALS	SX_OB_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS
Sampling date / time				31-May-2022 20:29	31-May-2022 23:47	31-May-2022 03:51	31-May-2022 08:13	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-006	EM2210307-007	EM2210307-008	EM2210307-011	EM2210307-012
				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	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_IB_20220531_20_29_SS_Primary_ALS	SX_IB_20220531_23_47_SS_Primary_ALS	SX_IB_20220601_03_51_SS_Primary_ALS	SX_OB_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS
Sampling date / time				31-May-2022 20:29	31-May-2022 23:47	31-May-2022 03:51	31-May-2022 08:13	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-006	EM2210307-007	EM2210307-008	EM2210307-011	EM2210307-012
				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	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_IB_20220531_20_29_SS_Primary_ALS	SX_IB_20220531_23_47_SS_Primary_ALS	SX_IB_20220601_03_51_SS_Primary_ALS	SX_OB_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS
Sampling date / time				31-May-2022 20:29	31-May-2022 23:47	31-May-2022 03:51	31-May-2022 08:13	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-006	EM2210307-007	EM2210307-008	EM2210307-011	EM2210307-012
				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_IB_20220531_20_29_SS_Primary_ALS	SX_IB_20220531_23_47_SS_Primary_ALS	SX_IB_20220601_03_51_SS_Primary_ALS	SX_OB_20220531_08_13_SS_Primary_ALS	SX_OB_20220531_08_15_SS_Duplicate_ALS
Sampling date / time				31-May-2022 20:29	31-May-2022 23:47	31-May-2022 03:51	31-May-2022 08:13	31-May-2022 08:15
Compound	CAS Number	LOR	Unit	EM2210307-006	EM2210307-007	EM2210307-008	EM2210307-011	EM2210307-012
				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	%	99.6	102	94.7	----	----
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	97.6	91.3	98.5	----	----
Toluene-D8	2037-26-5	0.1	%	85.5	77.3	90.3	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	105	98.1	107	----	----
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>								
Phenol-d6	13127-88-3	0.025	%	101	105	96.5	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%	115	120	110	----	----
2,4,6-Tribromophenol	118-79-6	0.025	%	93.5	97.7	89.4	----	----
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>								
Nitrobenzene-D5	4165-60-0	0.025	%	96.1	99.6	91.8	----	----
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	94.1	98.0	89.8	----	----
2-Fluorobiphenyl	321-60-8	0.025	%	101	106	97.5	----	----
Anthracene-d10	1719-06-8	0.025	%	98.2	103	94.8	----	----
4-Terphenyl-d14	1718-51-0	0.025	%	104	108	98.4	----	----
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.0002	%	114	109	106	----	----
13C8-PFOA	----	0.0002	%	115	114	112	----	----



**Analytical Results**

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220531_12_17_SS_Primary_ALS	SX_OB_20220531_16_01_SS_Primary_ALS	SX_OB_20220531_16_09_SS_Triplicate_ALS	SX_IB_20220531_20_29_SS_Primary_ALS	SX_IB_20220531_23_47_SS_Primary_ALS
Sampling date / time				31-May-2022 12:17	31-May-2022 16:01	31-May-2022 08:15	31-May-2022 20:29	31-May-2022 23:47
Compound	CAS Number	LOR	Unit	EM2210307-013	EM2210307-014	EM2210307-015	EM2210307-016	EM2210307-017
				Result	Result	Result	Result	Result
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Final pH	----	0.1	pH Unit	8.8	9.4	9.7	9.8	9.8



**Analytical Results**

Sub-Matrix: <b>SOIL</b> (Matrix: <b>SOIL</b> )			Sample ID	<b>SX_IB_20220601_03_51_SS_Primary_ALS</b>	----	----	----	----
			Sampling date / time	31-May-2022 03:51	----	----	----	----
Compound	CAS Number	LOR	Unit	<b>EM2210307-018</b>	-----	-----	-----	-----
				Result	---	---	---	---
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Final pH	----	0.1	pH Unit	<b>9.5</b>	----	----	----	----





## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID		SX_IB_20220601_04_31_SR_Rinsate_ALS	SX_IB_20220601_04_32_SB_Blank_ALS	----	----	----
Sampling date / time			31-May-2022 04:31		31-May-2022 04:32		----	----	----
Compound	CAS Number	LOR	Unit	EM2210307-009	EM2210307-010	-----	-----	-----	
				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	0.02	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_20220601_04_31_SR_Rinsate_ALS	SX_IB_20220601_04_32_SB_Blank_ALS	----	----	----
Sampling date / time				31-May-2022 04:31	31-May-2022 04:32	----	----	----	
Compound	CAS Number	LOR	Unit	EM2210307-009	EM2210307-010	-----	-----	-----	
				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	%	103	93.8	----	----	----	
13C8-PFOA	----	0.02	%	99.2	97.1	----	----	----	



## 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

## QUALITY CONTROL REPORT

<b>Work Order</b>	: <b>EM2210307</b>	<b>Page</b>	: 1 of 37
<b>Client</b>	: <b>AGON ENVIRONMENTAL PTY LTD</b>	<b>Laboratory</b>	: Environmental Division Melbourne
<b>Contact</b>	: Craig Trimbur	<b>Contact</b>	: Josh Alexander
<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>	: +61-3-8549 9600
<b>Project</b>	: JC0927	<b>Date Samples Received</b>	: 01-Jun-2022
<b>Order number</b>	: ----	<b>Date Analysis Commenced</b>	: 02-Jun-2022
<b>C-O-C number</b>	: 20220601043926-ALS-8	<b>Issue Date</b>	: 07-Jun-2022
<b>Sampler</b>	: TG+WOH+AGON		
<b>Site</b>	: 20220601043926-ALS-8		
<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.

Signatories	Position	Accreditation Category
Andrew Lu	VOC Section Supervisor	Melbourne Inorganics, Springvale, VIC
Andrew Lu	VOC Section Supervisor	Melbourne Organics, Springvale, VIC
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
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Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC



## General Comments

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

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

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

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

## Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4376633)</b>									
EM2210028-013	Anonymous	EG005T: Nickel	7440-02-0	2	mg/kg	70	82	15.9	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	48	57	17.5	0% - 50%
EM2210028-013	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	36	26	32.6	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	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	14	10	35.2	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	50	32	42.2	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	89	61	37.2	0% - 50%
EM2210307-005	SX_OB_20220531_16_09_ SS_Triplicate_ALS	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	65	77	17.8	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	121	123	2.1	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	38	48	24.1	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	42	51	19.2	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	59	71	18.9	0% - 50%		

**EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4378326)**



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: 4378326) - continued</b>									
EM2210112-001	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.7	7.7	0.0	0% - 20%
EM2210307-001	SX_OB_20220531_08_13_SS_Primary_ALS	EA001: pH (CaCl2)	----	0.1	pH Unit	7.5	7.4	0.0	0% - 20%
<b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4376877)</b>									
EM2210112-001	Anonymous	EA055: Moisture Content	----	0.1	%	29.5	28.1	4.9	0% - 20%
EM2210307-002	SX_OB_20220531_08_15_SS_Duplicate_ALS	EA055: Moisture Content	----	0.1	%	32.7	30.9	5.6	0% - 20%
<b>EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4376634)</b>									
EM2210028-013	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2210307-005	SX_OB_20220531_16_09_SS_Triplicate_ALS	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: 4376616)</b>									
EM2210112-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
EM2210178-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 4376617)</b>									
EM2210307-007	SX_IB_20220531_23_47_S_S_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	1.1	<1.0	12.3	No Limit
<b>EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4379211)</b>									
EM2210216-001	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EM2210157-002	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
<b>EK040T: Fluoride Total (QC Lot: 4376626)</b>									
EM2210112-001	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	160	160	0.0	No Limit
EM2210307-001	SX_OB_20220531_08_13_SS_Primary_ALS	EK040T: Fluoride	16984-48-8	40	mg/kg	150	170	14.1	No Limit
<b>EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4376579)</b>									
EM2210028-007	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2210307-006	SX_IB_20220531_20_29_S_S_Primary_ALS	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4375203)</b>									
EM2210307-001	SX_OB_20220531_08_13_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: 4375203)</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: 4375203) - continued</b>									
EM2210307-001	SX_OB_20220531_08_13_ 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: 4375203)</b>									
EM2210307-001	SX_OB_20220531_08_13_ 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: 4376577)</b>									
EM2210028-007	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EM2210307-006	SX_IB_20220531_20_29_S S_Primary_ALS	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: 4376577) - continued</b>									
EM2210307-006	SX_IB_20220531_20_29_S S_Primary_ALS	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: 4376577)</b>									
EM2210028-007	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		
EM2210307-006	SX_IB_20220531_20_29_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
		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		
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4376577)</b>									
EM2210028-007	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





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: 4376577) - continued</b>									
EM2210028-007	Anonymous	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
EM2210307-006	SX_IB_20220531_20_29_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		
<b>EP075I: Organochlorine Pesticides (QC Lot: 4376577)</b>									
EM2210028-007	Anonymous	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit



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: 4376577) - continued</b>									
EM2210028-007	Anonymous	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
EM2210307-006	SX_IB_20220531_20_29_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		
<b>EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4375203)</b>									
EM2210307-001	SX_OB_20220531_08_13_ 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: 4376578)</b>									
EM2210028-007	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
EM2210307-006	SX_IB_20220531_20_29_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
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4375203)</b>									
EM2210307-001	SX_OB_20220531_08_13_ SS_Primary_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<20	<20	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>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4375203) - continued</b>											
EM2210307-001	SX_OB_20220531_08_13_SS_Primary_ALS	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: 4376578)</b>											
EM2210028-007	Anonymous	EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	120	16.3	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	120	82.4	No Limit		
EM2210307-006	SX_IB_20220531_20_29_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		
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4377673)</b>											
EM2209709-005	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		
EM2210112-009	Anonymous	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: 4377673)</b>											
EM2209709-005	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit		
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit		
		EM2210112-009	Anonymous	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		



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: 4377673) - continued</b>									
EM2210112-009	Anonymous	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: 4377673)</b>									
EM2209709-005	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
		EM2210112-009	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<5.0 µg/kg	<0.0050
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9			0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6			0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8			0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2			0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7			0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2			0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4377673)</b>									
EM2209709-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4377673) - continued</b>									
EM2209709-005	Anonymous	EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2210112-009	Anonymous	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: 4377673)</b>									
EM2209709-005	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
EM2210112-009	Anonymous	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: 4379236)</b>									
EM2209989-004	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: 4381307)</b>									
EM2209858-001	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	0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit



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: 4381307) - continued</b>									
EM2209858-001	Anonymous	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
EM2210307-006	SX_IB_20220531_20_29_S S_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: 4381323)</b>									
EM2209858-007	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: 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
EM2210307-016	SX_IB_20220531_20_29_S S_Primary_ALS	EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		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
EM2210307-017	SX_IB_20220531_23_47_S S_Primary_ALS	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
		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
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4381452)</b>									
EM2210307-007	SX_IB_20220531_23_47_S S_Primary_ALS	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
		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
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4381457)</b>									
EM2210307-007	SX_IB_20220531_23_47_S S_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	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>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4379236)</b>									
EM2209989-004	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 (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: 4381307)</b>									
EM2209858-001	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		
EM2210307-006	SX_IB_20220531_20_29_S S_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit		
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4381323)</b>									
EM2209858-007	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4381323) - continued</b>									
EM2209858-007	Anonymous	EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EM2210307-016	SX_IB_20220531_20_29_S S_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4381452)</b>							
EM2210307-017	SX_IB_20220531_23_47_S S_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4381457)</b>							
EM2210307-007	SX_IB_20220531_23_47_S S_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





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: 4381457) - continued</b>									
EM2210307-007	SX_IB_20220531_23_47_S S_Primary_ALS	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: 4379236)</b>									
EM2209989-004	Anonymous	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
		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: 4381307)</b>									
EM2209858-001	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
EM2210307-006	SX_IB_20220531_20_29_S S_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



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: 4381307) - continued</b>									
EM2210307-006	SX_IB_20220531_20_29_S S_Primary_ALS	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: 4381323)</b>									
EM2209858-007	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2210307-016	SX_IB_20220531_20_29_S S_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: 4381452)</b>									
EM2210307-017	SX_IB_20220531_23_47_S S_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	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: 4381452) - continued</b>									
EM2210307-017	SX_IB_20220531_23_47_S S_Primary_ALS	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: 4381457)</b>									
EM2210307-007	SX_IB_20220531_23_47_S S_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>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4379236)</b>									
EM2209989-004	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: 4381307)</b>									
EM2209858-001	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



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: 4381307) - continued</b>									
EM2209858-001	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
EM2210307-006	SX_IB_20220531_20_29_S S_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: 4381323)</b>									
EM2209858-007	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2210307-016	SX_IB_20220531_20_29_S S_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: 4381452)</b>									
EM2210307-017	SX_IB_20220531_23_47_S S_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: 4381457)</b>									
EM2210307-007	SX_IB_20220531_23_47_S S_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



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: 4381457) - continued</b>									
EM2210307-007	SX_IB_20220531_23_47_S S_Primary_ALS	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: 4379236)</b>									
EM2209989-004	Anonymous	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: 4381307)</b>									
EM2209858-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.02	0.03	40.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.01	0.02	66.7	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	0.02	0.03	40.0	No Limit
EM2210307-006	SX_IB_20220531_20_29_S S_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: 4381323)</b>									
EM2209858-007	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2210307-016	SX_IB_20220531_20_29_S S_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: 4381452)</b>									
EM2210307-017	SX_IB_20220531_23_47_S S_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: 4381457)</b>									
EM2210307-007	SX_IB_20220531_23_47_S S_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit

Page : 19 of 37  
 Work Order : EM2210307  
 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: 4381457) - continued</b>									
EM2210307-007	SX_IB_20220531_23_47_S S_Primary_ALS	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



## 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: 4376633)</b>									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	94.6	70.0	130	
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	56.7	50.0	130	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	99.4	70.0	130	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	116	70.0	130	
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	83.7	70.0	130	
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	85.6	70.0	130	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	92.0	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	71.4	70.0	130	
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	95.8	70.0	130	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	70.7	70.0	130	
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4379402)</b>									
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.0	----	----	----	----	
<b>EA001: pH in soil using 0.01M CaCl extract (QCLot: 4378326)</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: 4376634)</b>									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	83.6	70.0	130	
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4376616)</b>									
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	77.9	70.0	130	
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4376617)</b>									
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	82.6	70.0	130	
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4379211)</b>									
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	95.4	70.0	130	
<b>EK040T: Fluoride Total (QCLot: 4376626)</b>									
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	82.9	75.2	110	
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4376579)</b>									
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	104	67.4	136	
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4375203)</b>									
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	95.6	69.2	116	
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	96.2	67.7	116	
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	92.8	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: 4375203) - continued</b>									
EP074-UT: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4.2 mg/kg	91.4	65.2	112	
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	93.2	69.4	111	
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	91.6	68.4	110	
<b>EP074H: Naphthalene (QCLot: 4375203)</b>									
EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	0.6 mg/kg	91.6	72.3	114	
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4375203)</b>									
EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	108	47.0	138	
EP074-UT: 1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	99.8	57.6	125	
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	98.0	72.3	115	
EP074-UT: trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	97.7	60.5	122	
EP074-UT: cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	93.6	70.3	112	
EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	96.6	66.6	115	
EP074-UT: 1,1,1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	95.5	64.4	122	
EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	93.6	58.4	127	
EP074-UT: 1,2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	111	72.9	114	
EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	96.4	64.7	115	
EP074-UT: 1,1,2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	100	72.6	116	
EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	93.2	60.0	119	
EP074-UT: 1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	90.6	71.8	116	
EP074-UT: 1,1,2,2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	94.6	66.1	116	
EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	107	39.8	128	
EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	96.0	70.3	113	
EP074-UT: 1,4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	90.6	62.6	113	
EP074-UT: 1,2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	94.0	70.8	110	
EP074-UT: 1,2,4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	93.6	48.4	120	
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4376577)</b>									
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	105	74.5	126	
EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	104	72.7	126	
EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	105	73.5	132	
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	107	72.8	128	
EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	2 mg/kg	107	73.3	134	
EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	2 mg/kg	108	72.4	128	
EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	106	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	106	71.9	128	
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	105	54.4	135	
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4376577)</b>									





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>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4376577) - continued</b>									
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	107	71.5	130	
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	106	73.4	129	
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	107	74.3	129	
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	103	70.9	133	
EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	106	71.8	132	
EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	87.1	41.0	156	
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	111	65.3	134	
EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	93.8	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	95.2	62.0	128	
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	80.7	34.5	137	
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4376577)</b>									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	106	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	107	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	107	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	107	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	108	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	106	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	108	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	108	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	110	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	110	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	113	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	112	65.1	130	
EP075-EM: Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	113	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	112	72.9	135	
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	113	71.3	134	
<b>EP075I: Organochlorine Pesticides (QCLot: 4376577)</b>									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	107	71.0	129	
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	106	74.8	126	
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	108	75.7	130	
EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	2 mg/kg	107	70.8	130	
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	108	76.5	134	
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	106	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	107	76.8	130	
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	106	73.6	130	
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	106	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	108	75.3	131	
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	107	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: 4376577) - continued</b>									
EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	107	71.0	132	
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	109	78.0	133	
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	88.6	69.0	143	
EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	2 mg/kg	109	55.7	145	
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	112	71.4	135	
EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	112	74.8	134	
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	111	70.2	135	
EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	110	77.7	133	
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	112	63.6	135	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4375203)</b>									
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	93.6	61.1	119	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4376578)</b>									
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	670 mg/kg	87.5	74.4	129	
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	2860 mg/kg	97.1	81.0	123	
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1490 mg/kg	95.4	81.8	121	
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5020 mg/kg	95.4	70.0	130	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4375203)</b>									
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	92.7	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: 4376578)</b>									
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1000 mg/kg	90.5	75.4	132	
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	3770 mg/kg	104	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	250 mg/kg	79.2	73.3	136	
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5020 mg/kg	100	70.0	130	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4377673)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	93.6	72.0	128	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	104	73.0	123	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	80.2	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	106	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	108	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	119	59.0	134	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4377673)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	102	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.6	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	112	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	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	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4377673) - continued</b>									
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.7	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	105	69.0	133	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4377673)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	98.4	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	116	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	94.8	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	121	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	61.0	139	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4377673)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	107	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	122	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	119	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	82.6	70.0	130	
<b>EP231P: PFAS Sums (QCLot: 4377673)</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	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4379236)</b>									
EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.444 µg/L	96.4	72.0	130	
EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.47 µg/L	98.6	71.0	127	
EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.457 µg/L	92.4	68.0	131	
EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.477 µg/L	102	69.0	134	
EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.465 µg/L	98.6	65.0	140	
EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.482 µg/L	101	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: 4381307)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	98.0	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	102	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	100	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	95.1	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	106	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	103	53.0	142	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4381323)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	101	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	96.5	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	100	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	98.8	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	106	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	98.5	53.0	142	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4381452)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	106	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	95.9	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	99.5	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	100	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	98.9	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	94.5	53.0	142	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4381457)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	108	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	90.4	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	98.7	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	92.2	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	95.9	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	89.7	53.0	142	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4379236)</b>									
EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	2.5 µg/L	105	73.0	129	
EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.5 µg/L	101	72.0	129	
EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.5 µg/L	97.8	72.0	129	
EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.5 µg/L	95.8	72.0	130	
EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.5 µg/L	98.5	71.0	133	
EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.5 µg/L	96.6	69.0	130	
EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.5 µg/L	96.3	71.0	129	
EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.5 µg/L	95.3	69.0	133	
EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.5 µg/L	96.5	72.0	134	
EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.5 µg/L	89.2	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: 4379236) - continued</b>								
EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	1.25 µg/L	105	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4381307)</b>								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	96.1	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	96.7	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	104	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.1	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	104	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	109	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	90.3	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	98.5	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	96.0	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	107	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4381323)</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	102	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	105	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	104	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	103	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	104	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	102	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	89.1	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	92.7	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	88.2	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	102	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4381452)</b>								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	94.8	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	90.6	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	113	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	100	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	102	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	99.3	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	99.3	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	87.5	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	96.3	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	104	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4381457)</b>								



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: 4381457) - continued</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	104	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	97.8	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	107	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	98.4	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.3	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	105	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	104	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	96.0	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 (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	100	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	115	71.0	132	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4379236)</b>									
EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.5 µg/L	96.8	67.0	137	
EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	1.25 µg/L	108	68.0	141	
EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	1.25 µg/L	97.5	70.0	130	
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	1.25 µg/L	93.8	70.0	130	
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	1.25 µg/L	98.5	70.0	130	
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.5 µg/L	116	65.0	136	
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.5 µg/L	94.3	61.0	135	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381307)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	99.9	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	108	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	88.5	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	111	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	88.2	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	96.1	61.0	135	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381323)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	98.0	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	106	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: 4381323) - continued</b>									
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	96.3	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	101	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	96.6	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	103	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	94.5	61.0	135	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381452)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	104	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	117	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	104	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	101	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	90.7	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	107	61.0	135	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381457)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	123	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	110	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	112	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	112	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	112	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	102	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	120	61.0	135	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4379236)</b>									
EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.469 µg/L	97.2	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	101	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	93.5	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	86.7	70.0	130	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4381307)</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: 4381307) - continued</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	100	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	104	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	99.0	67.0	138	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	92.1	70.0	130	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4381323)</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	109	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	122	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	100	70.0	130	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4381452)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	109	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	119	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	106	67.0	138	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	74.3	70.0	130	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4381457)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	104	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	118	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	128	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	82.3	70.0	130	
<b>EP231P: PFAS Sums (QCLot: 4379236)</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: 4381307)</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: 4381323)</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: 4381452)</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: 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>EP231P: PFAS Sums (QCLot: 4381452) - continued</b>								
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----
<b>EP231P: PFAS Sums (QCLot: 4381457)</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: 4376633)</b>							
EM2210028-015	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	98.3	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	98.5	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	98.5	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	103	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	98.0	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	101	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	94.9	80.0	120
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4376634)</b>							
EM2210028-015	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	95.3	76.0	116
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4376616)</b>							
EM2210112-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	80.4	58.0	114
EM2210112-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	97.8	58.0	114
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4376617)</b>							
EM2210307-008	SX_IB_20220601_03_51_SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	87.2	58.0	114
EM2210307-008	SX_IB_20220601_03_51_SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	102	58.0	114
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4379211)</b>							
EM2210157-002	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	92.4	70.0	130
<b>EK040T: Fluoride Total (QCLot: 4376626)</b>							
EM2210112-002	Anonymous	EK040T: Fluoride	16984-48-8	400 mg/kg	70.9	70.0	130
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4376579)</b>							
EM2210066-008	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	# Not Determined	59.6	152



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike Concentration	SpikeRecovery(%) MS	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4375203)</b>							
EM2210307-002	SX_OB_20220531_08_15_SS_Duplicate_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	59.6	53.7	130
		EP074-UT: Toluene	108-88-3	2 mg/kg	61.9	55.1	124
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4375203)</b>							
EM2210307-002	SX_OB_20220531_08_15_SS_Duplicate_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	49.4	38.4	145
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	54.1	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	60.4	55.5	122
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4376577)</b>							
EM2210028-010	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	101	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	99.6	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	84.3	10.0	144
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4376577)</b>							
EM2210028-010	Anonymous	EP075-EM: Phenol	108-95-2	3 mg/kg	102	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	94.6	34.2	129
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4376577)</b>							
EM2210028-010	Anonymous	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	97.5	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	102	37.8	152
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4375203)</b>							
EM2210307-002	SX_OB_20220531_08_15_SS_Duplicate_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	54.7	42.3	111
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4376578)</b>							
EM2210066-007	Anonymous	EP071-EM: C10 - C14 Fraction	----	670 mg/kg	86.8	71.3	126
		EP071-EM: C15 - C28 Fraction	----	2860 mg/kg	96.4	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1490 mg/kg	94.3	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	5020 mg/kg	94.2	70.0	130
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4375203)</b>							
EM2210307-002	SX_OB_20220531_08_15_SS_Duplicate_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	53.8	39.9	109
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4376578)</b>							
EM2210066-007	Anonymous	EP071-EM: >C10 - C16 Fraction	----	1000 mg/kg	89.7	71.5	130
		EP071-EM: >C16 - C34 Fraction	----	3770 mg/kg	104	76.9	119
		EP071-EM: >C34 - C40 Fraction	----	250 mg/kg	76.5	65.3	139
		EP071-EM: >C10 - C40 Fraction (sum)	----	5020 mg/kg	99.4	70.0	130
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4377673)</b>							
EM2209709-012	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	97.1	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	93.4	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	88.2	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	114	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	94.3	68.0	136



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>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4377673) - continued</b>							
EM2209709-012	Anonymous	EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	102	59.0	134
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4377673)</b>							
EM2209709-012	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	96.9	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	85.9	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	104	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	108	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	96.9	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	102	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	94.8	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	94.0	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	104	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	94.2	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	111	69.0	133		
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4377673)</b>							
EM2209709-012	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	93.3	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	88.4	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	104	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	97.5	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	89.0	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	114	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	114	61.0	139
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4377673)</b>							
EM2209709-012	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	114	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	110	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	114	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	102	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: 4379236)</b>							
EM2209989-005	Anonymous	EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.444 µg/L	102	72.0	130
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.47 µg/L	109	71.0	127
		EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.457 µg/L	105	68.0	131



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: 4379236) - continued</b>							
EM2209989-005	Anonymous	EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.477 µg/L	113	69.0	134
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.465 µg/L	99.1	65.0	140
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.482 µg/L	104	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4381307)</b>							
EM2209858-002	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	95.1	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	99.0	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	102	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	110	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	99.4	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4381323)</b>							
EM2209858-008	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	96.6	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	95.6	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	110	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	90.1	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	76.4	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4381452)</b>							
EM2210307-018	SX_IB_20220601_03_51_SS_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	114	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	96.7	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	103	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	95.1	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	95.9	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	94.4	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4381457)</b>							
EM2210307-008	SX_IB_20220601_03_51_SS_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	111	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	97.9	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	107	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	108	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	91.3	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	93.8	53.0	142
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4379236)</b>							
EM2209989-005	Anonymous	EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	2.5 µg/L	107	73.0	129
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.5 µg/L	102	72.0	129
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.5 µg/L	96.9	72.0	129
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.5 µg/L	101	72.0	130
		EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.5 µg/L	104	71.0	133
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.5 µg/L	105	69.0	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>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4379236) - continued</b>									
EM2209989-005	Anonymous	EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.5 µg/L	101	71.0	129		
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.5 µg/L	112	69.0	133		
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.5 µg/L	102	72.0	134		
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.5 µg/L	96.4	65.0	144		
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	1.25 µg/L	112	71.0	132		
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4381307)</b>									
EM2209858-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	128	73.0	129		
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	106	72.0	129		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	99.3	72.0	129		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	105	72.0	130		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	102	71.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	107	69.0	130		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	107	71.0	129		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	93.8	69.0	133		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	93.6	72.0	134		
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	83.1	65.0	144		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	104	71.0	132		
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4381323)</b>									
EM2209858-008	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	77.3	73.0	129		
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	93.6	72.0	129		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	97.5	72.0	129		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	101	72.0	130		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	104	71.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	101	69.0	130		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	88.0	71.0	129		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	84.5	69.0	133		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	78.7	72.0	134		
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	76.8	65.0	144		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	74.8	71.0	132		
		<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4381452)</b>							
		EM2210307-018	SX_IB_20220601_03_51_SS_Primary_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	91.9	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3			0.25 µg/L	88.8	72.0	129		
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4			0.25 µg/L	108	72.0	129		
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9			0.25 µg/L	103	72.0	130		
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1			0.25 µg/L	97.3	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	95.1	71.0	129		
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8			0.25 µg/L	79.6	69.0	133		



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4381452) - continued</b>							
EM2210307-018	SX_IB_20220601_03_51_SS_Primary_ALS	EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	91.0	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	79.9	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	106	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4381457)</b>							
EM2210307-008	SX_IB_20220601_03_51_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	92.3	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	118	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	107	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	96.7	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	103	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	93.5	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	108	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	96.2	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	108	71.0	132
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4379236)</b>							
EM2209989-005	Anonymous	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.5 µg/L	104	67.0	137
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	1.25 µg/L	109	68.0	141
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	1.25 µg/L	109	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	1.25 µg/L	103	70.0	130
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	1.25 µg/L	106	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.5 µg/L	116	65.0	136
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.5 µg/L	106	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381307)</b>							
EM2209858-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	101	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	101	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	98.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	105	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	106	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>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381307) - continued</b>							
EM2209858-002	Anonymous	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	100	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381323)</b>							
EM2209858-008	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	96.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	87.2	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	80.6	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	86.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	83.3	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	75.0	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	73.7	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381452)</b>							
EM2210307-018	SX_IB_20220601_03_51_SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	102	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	113	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	101	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	97.9	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	95.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	96.5	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	84.3	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381457)</b>							
EM2210307-008	SX_IB_20220601_03_51_SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	107	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	98.6	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	101	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	113	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>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4381457) - continued</b>							
EM2210307-008	SX_IB_20220601_03_51_SS_Primary_ALS	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	106	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	101	61.0	135
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4379236)</b>							
EM2209989-005	Anonymous	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.469 µg/L	104	63.0	143
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.476 µg/L	105	64.0	140
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.48 µg/L	107	67.0	138
		EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.483 µg/L	90.1	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4381307)</b>							
EM2209858-002	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	119	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	113	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	98.9	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4381323)</b>							
EM2209858-008	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	102	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	104	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	94.8	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	# 60.6	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4381452)</b>							
EM2210307-018	SX_IB_20220601_03_51_SS_Primary_ALS	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	109	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	116	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	72.8	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4381457)</b>							
EM2210307-008	SX_IB_20220601_03_51_SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	103	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	97.7	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	122	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	73.1	70.0	130





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

Work Order	: EM2210307	Page	: 1 of 12
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: Craig Trimbur	Telephone	: +61-3-8549 9600
Project	: JC0927	Date Samples Received	: 01-Jun-2022
Site	: 20220601043926-ALS-8	Issue Date	: 07-Jun-2022
Sampler	: TG+WOH+AGON	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: 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	EM2209858--008	Anonymous	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	60.6 %	70.0-130%	Recovery less than lower data quality objective

### Analysis Holding Time Compliance

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

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

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

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

Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
<b>Soil Glass Jar - Unpreserved (EA001)</b>								
SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	07-Jun-2022	✔	03-Jun-2022	03-Jun-2022	✔
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
<b>Soil Glass Jar - Unpreserved (EA055)</b>								
SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	----	----	----	02-Jun-2022	14-Jun-2022	✔
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
<b>Soil Glass Jar - Unpreserved (EG005T)</b>								
SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	06-Jun-2022	27-Nov-2022	✔	06-Jun-2022	27-Nov-2022	✔
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
<b>Soil Glass Jar - Unpreserved (EG035T)</b>								
SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	06-Jun-2022	28-Jun-2022	✔	06-Jun-2022	28-Jun-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_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	28-Jun-2022	✓	04-Jun-2022	10-Jun-2022	✓
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
<b>Soil Glass Jar - Unpreserved (EK026SF)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	06-Jun-2022	17-Jun-2022	✓
<b>EK040T: Fluoride Total</b>								
<b>Soil Glass Jar - Unpreserved (EK040T)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	28-Jun-2022	✓	07-Jun-2022	28-Jun-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_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	27-Nov-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_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	----	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
<b>Soil Glass Jar - Unpreserved (EP066-EM)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	02-Jun-2022	07-Jun-2022	✓	02-Jun-2022	07-Jun-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>EP074H: Naphthalene</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	02-Jun-2022	07-Jun-2022	✓	02-Jun-2022	07-Jun-2022	✓
<b>EP074I: Volatile Halogenated Compounds</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	02-Jun-2022	07-Jun-2022	✓	02-Jun-2022	07-Jun-2022	✓
<b>EP075A: Phenolic Compounds (Halogenated)</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>EP075I: Organochlorine Pesticides</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	03-Jun-2022	13-Jul-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 Petroleum Hydrocarbons</b>									
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>									
SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	02-Jun-2022	07-Jun-2022	✓	02-Jun-2022	07-Jun-2022	✓	
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b>									
SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>									
SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	02-Jun-2022	07-Jun-2022	✓	02-Jun-2022	07-Jun-2022	✓	
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b>									
SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	14-Jun-2022	✓	03-Jun-2022	13-Jul-2022	✓	
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>									
<b>HDPE Soil Jar (EP231X)</b>									
SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	13-Jul-2022	✓	
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>									
<b>HDPE Soil Jar (EP231X)</b>									
SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	13-Jul-2022	✓	
<b>EP231C: Perfluoroalkyl Sulfonamides</b>									
<b>HDPE Soil Jar (EP231X)</b>									
SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	13-Jul-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>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	13-Jul-2022	✓
<b>EP231P: PFAS Sums</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	13-Jul-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_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS, SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS, SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	03-Jun-2022	06-Jun-2022	30-Nov-2022	✓	06-Jun-2022	30-Nov-2022	✓
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_IB_20220601_04_31_SR_Rinsate_ALS,	SX_IB_20220601_04_32_SB_Blank_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	27-Nov-2022	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS, SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS, SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	03-Jun-2022	06-Jun-2022	30-Nov-2022	✓	06-Jun-2022	30-Nov-2022	✓
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_IB_20220601_04_31_SR_Rinsate_ALS,	SX_IB_20220601_04_32_SB_Blank_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	27-Nov-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_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS, SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS, SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	03-Jun-2022	06-Jun-2022	30-Nov-2022	✓	06-Jun-2022	30-Nov-2022	✓
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_IB_20220601_04_31_SR_Rinsate_ALS,	SX_IB_20220601_04_32_SB_Blank_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	27-Nov-2022	✓
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS, SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS, SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	03-Jun-2022	06-Jun-2022	30-Nov-2022	✓	06-Jun-2022	30-Nov-2022	✓
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_IB_20220601_04_31_SR_Rinsate_ALS,	SX_IB_20220601_04_32_SB_Blank_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	27-Nov-2022	✓
<b>EP231P: PFAS Sums</b>								
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS, SX_OB_20220531_08_13_SS_Primary_ALS, SX_OB_20220531_12_17_SS_Primary_ALS, SX_OB_20220531_16_09_SS_Triplicate_ALS, SX_IB_20220531_23_47_SS_Primary_ALS,	SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS, SX_OB_20220531_08_15_SS_Duplicate_ALS, SX_OB_20220531_16_01_SS_Primary_ALS, SX_IB_20220531_20_29_SS_Primary_ALS, SX_IB_20220601_03_51_SS_Primary_ALS	03-Jun-2022	06-Jun-2022	30-Nov-2022	✓	06-Jun-2022	30-Nov-2022	✓
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_IB_20220601_04_31_SR_Rinsate_ALS,	SX_IB_20220601_04_32_SB_Blank_ALS	31-May-2022	03-Jun-2022	27-Nov-2022	✓	03-Jun-2022	27-Nov-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>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	3	25	12.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	13	15.38	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	13	15.38	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	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	19	15.79	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	2	13	15.38	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	4	25	16.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	13	7.69	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	13	7.69	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	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	13	7.69	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	2	25	8.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	13	7.69	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	13	7.69	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	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	13	7.69	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	4	25	16.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	13	7.69	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	13	7.69	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	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	13	7.69	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	6	50	12.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	9	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	50	8.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	50	8.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	50	8.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	9	11.11	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.