

# TBM Spoil Waste Categorisation Report

<b>TBM Spoil Waste Cat Report No:</b>	D05.0120220415192423_03	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001_01</u>
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## 1. Motherhub Summary

Source TBM/Bin at Pivot	1	Source Geological Domain	4
Approx. Source Tunnel Chainage From	344	Approx. Source Tunnel Chainage To	350
Approx. Rings From	145	Approx. Rings To	147
Foaming Agent	TamSoil 287AC	Water Source	Potable (City West Water)
For BSF Holding Bay No:	D05.01	Start of Filling From (Time / date)	01/04/2022
Tonnes Put in Holding Bay No:	7112.03	Finish of Filling (Time / Date)	05/04/2022
Classified Volume (LCM)	4000	Spoil Classification Decision	NPIW Containment
Sampling Ratio (samples per LCM)	1 : 200.00	Approx. Bank Cubic Meters (BCM)	1147.27

## 2. Agon Spoil Classification Decision

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

## 3. Agon Spoil Classification Assessment

### 3.1 Applicable Samples

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

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

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Table 3.1 - Applicable Sample ID's

*Table 3.1 - 1 Applicable Sample ID's*

Applicable Spoil Sample ID's		
SX_OB_20220404_08_18_SS_Primary_EUF	SX_OB_20220404_16_17_SS_Primary_EUF	SX_OB_20220405_08_16_SS_Primary_EUF
SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_16_19_SS_Duplicate_EUF	SX_OB_20220405_08_22_SS_Primary_ALS
SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_16_20_SS_Triplicate_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS
SX_OB_20220404_08_35_SS_Triplicate_EUF	SX_OB_20220404_20_03_SS_Primary_ALS	SX_OB_20220405_08_25_SS_Triplicate_EUF
SX_OB_20220404_12_01_SS_Primary_ALS	SX_OB_20220404_20_05_SS_Primary_EUF	SX_OB_20220405_12_23_SS_Primary_ALS
SX_OB_20220404_12_06_SS_Primary_EUF	SX_OB_20220405_00_03_SS_Primary_ALS	SX_OB_20220405_12_30_SS_Primary_EUF
SX_OB_20220404_16_12_SS_Primary_ALS	SX_OB_20220405_04_06_SS_Primary_EUF	
Total Sample Numbers	20	Ratio Acceptable
Primary Sample Numbers	14	Yes
Classified Volume (LCM)	4000 m <sup>3</sup>	
Volume: Sample Number Ratio (Samples per LCM)	1: 200.00	

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## 3.2 Data Quality Compliance with SAQP

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

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

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

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## 3.3 Selection of the Spoil Sample Testing Regime

*Table 3.3 - 1 Selection of the Spoil Sample Testing Regime*

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

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## 3.4 Spoil Compliance with SAQP Criteria for Containment Cell

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

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

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

IWRG 621.1 Exceedance Test Results												
Chemical	Unit	LOR	No. of 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	20*	14	1 : 200.00	20	10	23.7	26.82	39	20	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Chromium (Hexavalent)	mg/kg	1	20*	14	1 : 200.00	5	<1.0	1.28	NA	1.4	1	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Nickel	mg/kg	5	20*	14	1 : 200.00	20	138	206.9	222.8	300	60	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)

“\*” - Ratio used for categorisation of spoil is 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	20*	14	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFOA	ug/kg	5	20*	14	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFHxS	ug/kg	5	20*	14	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
ASLP (pH= 5) PFAS Concentrations											
PFOA	ug/L	0.01	20*	14	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS+PFHxS	ug/L	0.01	20*	14	0	N/A	N/A	N/A	0.04	7	NPIW-Containment
ASLP (pH= 7) PFAS Concentrations											
PFOA	ug/L	0.01	20*	14	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS+PFHxS	ug/L	0.01	20*	14	0	N/A	N/A	N/A	<0.01	7	NPIW-Containment

“\*” - Ratio used for categorisation of spoil is 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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iv. Enriched nickel concentrations also corresponded with enriched copper (Two soil and rock) and zinc (all units) indicating that the nickel is likely associated with geochemical enrichment rather than added contamination.

Golder therefore concluded that the nickel is likely associated with geochemical enrichment rather than added contamination.

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.

2. Previous reviews of the presence of hexavalent chromium (CrVI) in soil data outlined on the SAQP (Rev 5) were undertaken by Golders (2017) and later consolidated with data compiled by Mikkonen by AJJV (2019). The AJJV review of the consolidated data set identified:

- Samples reported to contain hexavalent chromium above the IWRG621 Table 2 Fill Material Upper Limit of 1mg/kg, were not collected in areas considered to be where anthropogenic sources of CrVI were present
- The ratio of tests reported above the laboratory LOR of 0.5 mg/kg was 15 out of 84 tests
- The ratio of tests where CrVI was above 1mg/kg was 3 in 84 samples
- The maximum reported concentration was 2.8mg/kg
- The 95%UCLave was 0.439

The AJJV data review was to assess whether the spoil derived from the tunnelling operations would contain chemicals that would result in the spoil being classified as something other than Fill Material. AJJV concluded the CrVI was present due to natural enrichment. Refer extract from the AJJV report below:

*In summary, the reported CrVI concentration reported in the Older Volcanics are considered to be naturally occurring / enriched based on the following:*

- *No potential CrVI sources have been identified in the vicinity of the sampling locations that reported the CrVI concentrations.*
- *Similar concentrations of CrVI were reported in the Older Volcanics on the MMRP, that were deemed to be naturally occurring.*
- *The 2017 Golder report concluded that enriched arsenic concentrations in the Older Volcanics on WGT*
- *Corresponded with enriched vanadium indicating that the arsenic is likely associated with geochemical enrichment rather than added contamination. The elevated CrVI is also found through this area deemed to be geochemically enriched.*

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- *There were limited exceedances of CrVI in the groundwater, which suggested no evidence of an anthropogenic source or Potential pathway from the surface*

*Given the large volume of ground to be tunnelled, the 95% UCL's in Table E.2 and the likely naturally enriched nature of the reported CrVI, AJJV consider that the CrVI impacts will not alter the spoil classification within Domain 5. AJJV note that the material will undergo ongoing sampling as the TBM spoil is produced – sampling will be outlined within the SAQP. If any contaminated material is encountered beyond the extent of the nominated potentially contaminated domains, this will trigger management of the material in accordance with Tunnel Spoil Disposal Framework.*

Agon notes that Table E1: Summary of elevated concentration within Natural materials concludes the presence of hexavalent chromium may “Potentially” classify the spoil as PIW.

Unit	Element Exceeding Criteria	Count	Detects	Min	Max	Mean	Median	Standard Deviation	Count of Exceedance	95% UCL	Fill Material Upper Limit	Victorian Background Soil Database Soil greater than 0.6 m below surface				Findings		Classification as PIW
												Count	Min#	Max	Mean	95% UCL Statistical Assessment	Victorian Soil Database Assessment	
Older Volcanics	Fluoride	84	1	50	600	204	185	109	2	225.1	450	92	<100	790	283	Not Exceeding	Natural Origin	No Affect
	Arsenic	101	84	<4	860	33	7	116	25	84.6	20	994	≤10	1200	18	Exceeding	Natural Origin	No Affect
	Cadmium	103	6	<0.1	3	0.52	0.5	0.41	2	NA	3	-	-	-	-	NA	No Data	No Affect
	Chromium (VI) <sup>1</sup>	84	15	<0.5	2.8	0.927	0.7	0.592	3	0.439	1	-	-	-	-	NA	No Data	Potentially
	Copper	101	98	<5	326	63	55	44	15	82.4	100	799	<25	87	<25	Not Exceeding	No Data	No Affect
	Mercury	101	7	<0.1	1.7	0.077	0.05	0.17	1	NA	1	-	-	-	-	NA	No Data	No Affect
	Nickel	101	99	<2	451	127	115	73	88	140.6	60	830	<25	170	28	Exceeding	Natural Origin	No Affect
	Zinc	101	99	<5	483	84	63	79	6	98.7	200	819	<25	190	<25	Not Exceeding	No Data	No Affect

A review of the Agon data for spoil reported in data set B.05 shows:

- A similar ratio of test results >1mg/kg compared to the overall data set;
- If a ½ LOR is substituted for results reported as <LOR (of 1mg/kg), then like the AJJV 95% UCL, the calculation is <1mg/kg

The results also show that there are no synthetic compounds reported above the laboratory LOR, another indication that anthropogenic contamination is not present

2.	Test result outcomes can lead to two classification possibilities, however the classification decision follows the preference of the waste management hierarchy.
3.	Spoil is not from a “Zone of Exception”. Spoil from a 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.

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4.	Loose Cubic metres (LCM) to mass (tonnes) conversion ratio used is 1 LCM:1.6 tonnes
5.	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.
6.	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.
7.	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.
8.	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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ATTACHMENT A: TABULATED RESULTS



Metals																
Arsenic	Cadmium	Copper	Chromium (III+VI)	Chromium (hexavalent)	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene
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

EPA Victoria, 13 Sep 2019, EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold  
 EPA Victoria, 13 Sep 2019, EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold  
 EPA Victoria, 13 Sep 2019, EPA PFAS Classification - Tunnel Zone - No option for disposal threshold  
 EPA Victoria, July 2009, EPA Victoria IWRG621 Category B Leached Upper Limits  
 EPA Victoria, July 2009, EPA Victoria IWRG621 Category B Upper Limits  
 EPA Victoria, July 2009, EPA Victoria IWRG621 Category C Leached Upper Limits  
 EPA Victoria, July 2009, EPA Victoria IWRG621 Category C Upper Limits  
 EPA Victoria, July 2009, EPA Victoria IWRG621 Fill Upper Limits



PAH																
Anthracene	Benzo(a)anthracene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Half)	Benzo(e)pyrene	Benzo(b+g)fluoranthene	Benzo(k,h,i)perylene	Benzo(f)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene
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

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Table with 17 columns: PAHs (Sum of total), Benzene, Ethylbenzene, Toluene, Xylene (o), Xylene (m & p), Xylene Total, C6-C10, C6-C10 (F1 minus BTEX), C10-C16, C10-C16 (F2 minus Naphthalene), C16-C34, C34-C40, C10-C40 (Sum of total), C6-C9, C10-C14, C15-C28. Rows include EQL, 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, EPA Victoria IWRG621 Category C Leached Upper Limits, EPA Victoria IWRG621 Category C Upper Limits, EPA Victoria IWRG621 Fill Upper Limits.

Table with 23 columns: Location Cod Field ID, Sample Code, Date, Lab Report Number, Lab Name, Sample Type, Parent Sample, PAHs (Sum of total), Benzene, Ethylbenzene, Toluene, Xylene (o), Xylene (m & p), Xylene Total, C6-C10, C6-C10 (F1 minus BTEX), C10-C16, C10-C16 (F2 minus Naphthalene), C16-C34, C34-C40, C10-C40 (Sum of total), C6-C9, C10-C14, C15-C28. Rows list various sample analyses with their respective results.

Environmental Standards  
EPA Victoria, 13 Sep 2019, EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold

PAHs (Sum of total)	BTEX						TRH							TPH		
	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene Total	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	C6-C9	C10-C14	C15-C28
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

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 EPA Victoria, 13 Sep 2019, EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold  
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		Organochlorine Pesticides														
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)
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

EPA Victoria, 13 Sep 2019, EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold  
 EPA Victoria, 13 Sep 2019, EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold  
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 EPA Victoria, July 2009, EPA Victoria IWRG621 Fill Upper Limits

Summary table with 17 columns for various PFAS and pesticides, showing detection limits and upper limits for different categories like EPA PFAS Classification and EPA Victoria IWRG621.

Main data table with columns: Location, Sample Code, Date, Lab Report Number, Lab Name, Sample Type, Parent Sample, and 17 chemical concentrations (mg/kg).

Chlordane (trans)	Hexachlorobenzene	Heptachlor	Heptachlor epoxide	α-BHC	β-BHC	δ-BHC	γ-BHC (Lindane)	Methoxychlor	Toxaphene	Organochlorine pesticides EPA Vic	Other organochlorine pesticides EPA Vic	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
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

EPA Victoria, 13 Sep 2019, EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold  
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Phenols																
4-chloro-3-methylphenol	Pentachlorophenol	2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4,6-Dinitro-2-methylphenol	Tetrachlorophenols	2,3,5,6-Tetrachlorophenol	Cresol Total	4,6-Dinitro-o-cyclohexyl phenol	Phenols (halogenated) EPA Vic	Phenols (non-halogenated) EPA Vic	2,4-Dimethylphenol	2-Methylphenol	2-Nitrophenol	2,4-Dinitrophenol	3&4-Methylphenol (m&p-cresol)	4-Nitrophenol	Dinoseb
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

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Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	N-Ethyl perfluorooctane sulfonamide (NEFOSA)	N-ethyl-perfluorooctanesulfonamid oacetic acid (NEFOSAA)	N-ethylperfluorooctanesulfon amidoethanol (NEFOSE)	
mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg

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N-Methyl perfluorooctane sulfonamide (NMeFOSA)		N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)		N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)		Perfluorobutanoic acid (PFBA)		Perfluorobutane sulfonic acid (PFBS)		Perfluorodecanoic acid (PFDA)		Perfluorododecanoic acid (PFDoDA)		Perfluorodecanesulfonic acid (PFDS)		Perfluoroheptanoic acid
mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L

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PFOS/PFOA																
(PFHpA)	Perfluoroheptane sulfonic acid (PFHPS)		Perfluorohexanoic acid (PFHxA)		Perfluorononanoic acid (PFNA)		Perfluorononanesulfonic acid (PFNS)(trace)		Perfluorooctanoic acid (PFOA)		Perfluorooctane sulfonamide (PFOSA)		Perfluoropentanoic acid (PFPeA)		Perfluoropentane sulfonic acid (PFPeS)	
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

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Perfluoropropanesulfonic acid (PFPrS)		Perfluorotetra-decanoic acid (PFTeDA)		Perfluorotridecanoic acid (PFTIDA)		Perfluoroundecanoic acid (PFUnDA)		Perfluorooctanesulfonic acid (PFOS)		Perfluorohexane sulfonic acid (PFHxS)		Sum of PFHxS and PFOS		Sum of US EPA PFAS (PFOS + PFOA)*		Sum of enHealth PFAS
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

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(PFMS + PFOS + PFOA)*	Sum of PFAS		1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	1,1,1,2-tetrachloroethane	Bromodichloromethane	1,1,1-trichloroethane	Chloroform	1,1,2,2-tetrachloroethane	Chloromethane	cis-1,3-dichloropropene
	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

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Chlorinated Hydrocarbons																
Dibromomethane	Dichloromethane	Hexachlorobutadiene	Other chlorinated hydrocarbons EPA Vic	Trichloroethene	Chlorinated hydrocarbons EPA Vic	cis-1,2-dichloroethene	1,1,2-trichloroethane	trans-1,3-dichloropropene	Vinyl chloride	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	trans-1,2-dichloroethene	Tetrachloroethene	Sum of WA DWER PFAS
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	UG/KG

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NA		PCBs								Inorganics						
(n=10)*	Moisture Content	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1221	Arochlor 1260	Arochlor 1016	PCBs (Sum of total)	pH (after HCL)	pH (Final)	pH (Initial)	pH of Leaching Fluid	pH (aqueous extract)	Fluoride	Moisture Content (dried @ 103°C)
µg/L	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	-	-	mg/kg	%

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Cyanide Total	Halogenated Benzenes							Halogenated Hydrocarbons					MAH			
	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Bromobenzene	4-chlorotoluene	Chlorobenzene	Iodomethane	Bromomethane	1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Total MAH	Monocyclic aromatic hydrocarbons EPAVic	1,3,5-trimethylbenzene	Styrene
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

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	Solvents							SPOCAS
	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl ketone	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold								
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EPA Victoria IWRG621 Fill Upper Limits								

Location Cod	Field ID	Sample Code	Date	Lab Report Number	Lab Name	Sample Type	Parent Sample								
D05.01	SX_OB_20220404_08_18_SS_Primary_EUF	M22-Ap0007203	4/04/2022	877250	MGT	Normal		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
D05.01	SX_OB_20220404_08_18_SS_Primary_EUF	M22-Ap0007212	4/04/2022	877250	MGT	Normal									
D05.01	SX_OB_20220404_08_18_SS_Primary_EUF	M22-Ap0007221	4/04/2022	877250	MGT	Normal									
D05.01	SX_OB_20220404_08_33_SS_Primary_ALS	EM2206146001	4/04/2022	EM2206146	ALSE-Melbourne	Normal									7.8
D05.01	SX_OB_20220404_08_33_SS_Primary_ALS	EM2206146010	4/04/2022	EM2206146	ALSE-Melbourne	Normal									
D05.01	SX_OB_20220404_08_34_SS_Duplicate_ALS	EM2206146002	4/04/2022	EM2206146	ALSE-Melbourne	Field_D	EM2206146001								7.8
D05.01	SX_OB_20220404_08_34_SS_Duplicate_EUF	EM2206146011	4/04/2022	EM2206146	ALSE-Melbourne	Field_D	EM2206146010								
D05.01	SX_OB_20220404_08_35_SS_Triplicate_EUF	M22-Ap0007204	4/04/2022	877250	MGT	Interlab_D	EM2206146001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
D05.01	SX_OB_20220404_08_35_SS_Triplicate_EUF	M22-Ap0007213	4/04/2022	877250	MGT	Interlab_D	EM2206146001								
D05.01	SX_OB_20220404_08_35_SS_Triplicate_EUF	M22-Ap0007222	4/04/2022	877250	MGT	Interlab_D	EM2206146010								
D05.01	SX_OB_20220404_12_01_SS_Primary_ALS	EM2206146005	4/04/2022	EM2206146	ALSE-Melbourne	Normal									7.8
D05.01	SX_OB_20220404_12_01_SS_Primary_ALS	EM2206146012	4/04/2022	EM2206146	ALSE-Melbourne	Normal									
D05.01	SX_OB_20220404_12_06_SS_Primary_EUF	M22-Ap0007205	4/04/2022	877250	MGT	Normal		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
D05.01	SX_OB_20220404_12_06_SS_Primary_EUF	M22-Ap0007214	4/04/2022	877250	MGT	Normal									
D05.01	SX_OB_20220404_12_06_SS_Primary_EUF	M22-Ap0007223	4/04/2022	877250	MGT	Normal									
D05.01	SX_OB_20220404_16_12_SS_Primary_ALS	EM2206146006	4/04/2022	EM2206146	ALSE-Melbourne	Normal									7.8
D05.01	SX_OB_20220404_16_12_SS_Primary_ALS	EM2206146013	4/04/2022	EM2206146	ALSE-Melbourne	Normal									
D05.01	SX_OB_20220404_16_17_SS_Primary_EUF	M22-Ap0007206	4/04/2022	877250	MGT	Normal		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
D05.01	SX_OB_20220404_16_17_SS_Primary_EUF	M22-Ap0007215	4/04/2022	877250	MGT	Normal									
D05.01	SX_OB_20220404_16_17_SS_Primary_EUF	M22-Ap0007224	4/04/2022	877250	MGT	Normal									
D05.01	SX_OB_20220404_16_19_SS_Duplicate_EUF	M22-Ap0007207	4/04/2022	877250	MGT	Field_D	M22-Ap0007206	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
D05.01	SX_OB_20220404_16_19_SS_Duplicate_EUF	M22-Ap0007216	4/04/2022	877250	MGT	Field_D	M22-Ap0007215								
D05.01	SX_OB_20220404_16_19_SS_Duplicate_EUF	M22-Ap0007225	4/04/2022	877250	MGT	Field_D	M22-Ap0007224								
D05.01	SX_OB_20220404_16_20_SS_Triplicate_ALS	EM2206146007	4/04/2022	EM2206146	ALSE-Melbourne	Interlab_D	M22-Ap0007206								7.7
D05.01	SX_OB_20220404_16_20_SS_Triplicate_ALS	EM2206146014	4/04/2022	EM2206146	ALSE-Melbourne	Interlab_D	M22-Ap0007224								
D05.01	SX_OB_20220404_20_03_SS_Primary_ALS	EM2206146008	4/04/2022	EM2206146	ALSE-Melbourne	Normal									7.8
D05.01	SX_OB_20220404_20_03_SS_Primary_ALS	EM2206146015	4/04/2022	EM2206146	ALSE-Melbourne	Normal									
D05.01	SX_OB_20220404_20_05_SS_Primary_EUF	M22-Ap0007210	4/04/2022	877250	MGT	Normal		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
D05.01	SX_OB_20220404_20_05_SS_Primary_EUF	M22-Ap0007219	4/04/2022	877250	MGT	Normal									
D05.01	SX_OB_20220404_20_05_SS_Primary_EUF	M22-Ap0007228	4/04/2022	877250	MGT	Normal									
D05.01	SX_OB_20220405_00_03_SS_Primary_ALS	EM2206146009	5/04/2022	EM2206146	ALSE-Melbourne	Normal									7.6
D05.01	SX_OB_20220405_00_03_SS_Primary_ALS	EM2206146016	5/04/2022	EM2206146	ALSE-Melbourne	Normal									
D05.01	SX_OB_20220405_04_06_SS_Primary_EUF	M22-Ap0007211	5/04/2022	877250	MGT	Normal		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
D05.01	SX_OB_20220405_04_06_SS_Primary_EUF	M22-Ap0007220	5/04/2022	877250	MGT	Normal									
D05.01	SX_OB_20220405_04_06_SS_Primary_EUF	M22-Ap0007229	5/04/2022	877250	MGT	Normal									
D05.01	SX_OB_20220405_08_16_SS_Primary_EUF	M22-Ap0010606	5/04/2022	877551	MGT	Normal		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
D05.01	SX_OB_20220405_08_16_SS_Primary_EUF	M22-Ap0010616	5/04/2022	877551	MGT	Normal									
D05.01	SX_OB_20220405_08_16_SS_Primary_EUF	M22-Ap0010624	5/04/2022	877551	MGT	Normal									
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	EM2206168001	5/04/2022	EM2206168	ALSE-Melbourne	Normal									7.6
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	EM2206168011	5/04/2022	EM2206168	ALSE-Melbourne	Normal									
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	EM2206168002	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168001								7.7
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	EM2206168012	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011								
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	M22-Ap0010607	5/04/2022	877551	MGT	Interlab_D	EM2206168001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	M22-Ap0010617	5/04/2022	877551	MGT	Interlab_D	EM2206168001								
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	M22-Ap0010625	5/04/2022	877551	MGT	Interlab_D	EM2206168011								
D05.01	SX_OB_20220405_12_23_SS_Primary_ALS	EM2206168005	5/04/2022	EM2206168	ALSE-Melbourne	Normal									7.7
D05.01	SX_OB_20220405_12_23_SS_Primary_ALS	EM2206168013	5/04/2022	EM2206168	ALSE-Melbourne	Normal									
D05.01	SX_OB_20220405_12_30_SS_Primary_EUF	M22-Ap0010608	5/04/2022	877551	MGT	Normal		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
D05.01	SX_OB_20220405_12_30_SS_Primary_EUF	M22-Ap0010618	5/04/2022	877551	MGT	Normal									
D05.01	SX_OB_20220405_12_30_SS_Primary_EUF	M22-Ap0010626	5/04/2022	877551	MGT	Normal									

		Solvents					SPOCAS
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	-

EPA Victoria, 13 Sep 2019, EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold  
 EPA Victoria, 13 Sep 2019, EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold  
 EPA Victoria, 13 Sep 2019, EPA PFAS Classification - Tunnel Zone - No option for disposal threshold  
 EPA Victoria, July 2009, EPA Victoria IWRG621 Category B Leached Upper Limits  
 EPA Victoria, July 2009, EPA Victoria IWRG621 Category B Upper Limits  
 EPA Victoria, July 2009, EPA Victoria IWRG621 Category C Leached Upper Limits  
 EPA Victoria, July 2009, EPA Victoria IWRG621 Category C Upper Limits  
 EPA Victoria, July 2009, EPA Victoria IWRG621 Fill Upper Limits





							Metals															
							Arsenic	Cadmium	Copper	Chromium (III+VI)	Chromium (hexavalent)	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	PAHs (Vic EPA List)		
							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	
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal																	
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011																
RPD																						
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal																	
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011																
RPD																						

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

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 81 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL) )

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory



PAH

						Arsenic	Benzo(b+j)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(e)pyrene TEQ calc (Zero)	Benzo(e)pyrene TEC (LOR)	Benzo(a)pyrene TEQ calc (Half)	Benzo(e)pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	
						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
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal															
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011														
RPD																				
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal															
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011														
RPD																				

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

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							BTEX														
							Arsenic	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	
							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	
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal																
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011															
RPD																					
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal																
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011															
RPD																					

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							TRH					TPH								
							Arsenic	Xylene Total	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	C6-C9	C10-C14	C15-C28	C29-C36	C10-C36 (Sum of total)
							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
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal															
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011														
RPD																				
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal															
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011														
RPD																				

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							Orga														
							Arsenic	Aldrin	Dieldrin	Aldrin + Dieldrin	DDD	DDT	4,4-DDE	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endrin	Endrin ketone	Endrin aldehyde	Endosulfan sulphate	
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Location Code	Field ID	Date	Lab Report Number	Lab Name	Sample Type	Parent Sample															
D05.01	SX_OB_20220404_16_17_SS_Primary_EUF	4/04/2022	877250	MGT	Normal		39	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
D05.01	SX_OB_20220404_16_19_SS_Duplicate_EUF	4/04/2022	877250	MGT	Field_D	M22-Ap0007206	35	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RPD							11	0	0	0	0	0	0	0	0	0	0	0	0	0	0

							Orga															
							Arsenic	Aldrin	Dieldrin	Aldrin + Dieldrin	DDD	DDT	4,4-DDE	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endrin	Endrin ketone	Endrin aldehyde	Endosulfan sulphate		
							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	
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal																	
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011																
RPD																						
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal																	
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011																
RPD																						

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\*\*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) )

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							nochlorine Pesticides															
							Arsenic	Chlordane	Chlordane (cis)	Chlordane (trans)	Hexachlorobenzene	Heptachlor	Heptachlor epoxide	α-BHC	β-BHC	δ-BHC	γ-BHC (Lindane)	Methoxychlor	Toxaphene	Organochlorine pesticides EPA/Vic		
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal																	
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011																
RPD																						
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal																	
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011																
RPD																						

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

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\*\*\*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

							Arsenic	Other organochlorine pesticides EPA/Vic	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol	4-Chloro-3-methylphenol	Pentachlorophenol	2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4,6-Dinitro-2-methylphenol	Tetrachlorophenols	2,3,5,6-Tetrachlorophenol	Cresol Total	
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							2	0.03	0.5	0.5	1	1	0.5	1	1	0.05	5	10	0.03	0.5	
Location Code	Field ID	Date	Lab Report Number	Lab Name	Sample Type	Parent Sample															
D05.01	SX_OB_20220404_16_17_SS_Primary_EUF	4/04/2022	877250	MGT	Normal		39	<0.1	<0.5	<0.5	<1	<1	<0.5	<1	<1		<5	<10		<0.5	

						Arsenic	Other organochlorine pesticides EPA/Vic	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol	4-chloro-3-methylphenol	Pentachlorophenol	2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4,6-Dinitro-2-methylphenol	Tetrachlorophenols	2,3,5,6-Tetrachlorophenol	Cresol Total	
						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
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal															
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011														
RPD																				
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal															
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011														
RPD																				

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							Phenols															
							Arsenic	4,6-Dinitro-o-cyclohexyl phenol	Phenols (halogenated) EPA Vic	Phenols (non-halogenated) EPA Vic	2,4-Dimethylphenol	2-Methylphenol	2-Nitrophenol	2,4-Dinitrophenol	3,6,4-Methylphenol (m&p-cresol)	4-Nitrophenol	Dinoseb	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)		
							mg/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	
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal																	
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011																
RPD																						
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal																	
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011																
RPD																						

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

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 81 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL) )

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							Arsenic		10:2 Fluorotelomer sulfonic acid (10:2 FTS)		8:2 Fluorotelomer sulfonic acid (8:2 FTS)		6:2 Fluorotelomer sulfonic acid (6:2 FTS)		4:2 Fluorotelomer sulfonic acid (4:2 FTS)		N-Ethyl perfluorooctane sulfonamide (NEFOSA)		N-ethyl-perfluorooctanesulfonamid oacetic acid (NEFOSAA)		N	
							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
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal			<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
RPD								0		0		0		0		0		0		0		0
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal			<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD								0		0		0		0		0		0		0		0

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

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 81 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL) )

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							Arsenic	N-methylperfluorooctane sulfonamide (NMeFOSE)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid (NMeFOAAA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)	Perfluorobutanoic acid (PFBA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanoic acid (PFDA)			
							mg/kg	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal			<0.00005		<0.00005		<0.00005		<0.00002		<0.00002	
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011		<0.00005		<0.00005		<0.00005		<0.00002		<0.00002	
RPD									0		0		0		0		0
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal			<0.00005		<0.00005		<0.00005		<0.00002		<0.00002	
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011		<0.00005		<0.00005		<0.00005		<0.00001		<0.00001	
RPD									0		0		0		0		0

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

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



							PFOS/PFOA								
							Arsenic	Perfluorododecanoic acid (PFDDA)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptanoic acid (PFHPA)	Perfluoroheptane sulfonic acid (PFHPS)	Perfluorohexanoic acid (PFHA)	Perfluorononanoic acid (PFNA)	Perfluoronanesulfonic	
							mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011	<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
RPD							0		0		0		0		0
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD							0		0		0		0		0

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

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



							Arsenic	Arsenic acid (PFNS)(trace)	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonamide (PFOSA)	Perfluoropentanoic acid (PFPeA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorotetradecanoic acid (PFTeDA)
							mg/kg	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal									
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011			<0.00001	<0.00005	<0.00002	<0.00002		<0.00005
RPD									0	0	0	0		0
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal				<0.00001	<0.00005	<0.00002	<0.00002		<0.00005
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011			<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001
RPD									0	0	0	0		0

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

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





							Arsenic		Perfluorotridecanoic acid (PFTDA)		Perfluoroundecanoic acid (PFUNDA)		Perfluorooctanesulfonic acid (PFOS)		Perfluorohexane sulfonic acid (PFHxS)		Sum of PFHxS and PFOS		Sum of US EPA PFAS (PFOS + PFOA)*		Sum of enHealth PFAS	
							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
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal			<0.00002		<0.00002		<0.00001		<0.00001		<0.00001		<0.00001				
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011		<0.00002		<0.00002		<0.00001		<0.00001		<0.00001		<0.00001				
RPD																						
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal			<0.00002		<0.00002		<0.00001		<0.00001		<0.00001		<0.00001				
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD																						

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

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 81 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL) )

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory



							Arsenic	(PFHS + PFOS + PFDA)*	Sum of PFAS	Sum of PFAS	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	1,1,1,2-tetrachloroethane	Bromodichloromethane	1,1,1-trichloroethane			
							mg/kg	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		
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal				<0.00010														
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011			<0.00010														
RPD									0														
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal				<0.00010														
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011			<0.0001														
RPD									0														

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

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



						Chlorinated Hydrocarbons														
						Arsenic	Chloroform	1,1,2,2-tetrachloroethane	Chloromethane	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Other chlorinated hydrocarbons EPA Vc	Trichloroethene	Chlorinated hydrocarbons EPA Vc	cis-1,2-dichloroethene	1,1,2-trichloroethane	trans-1,3-dichloropropene	
						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
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal															
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011														
RPD																				
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal															
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011														
RPD																				

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

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 81 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL) )

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory



							NA													
							Arsenic	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	UG/KG	µg/L	%	mg/kg	mg/kg	mg/kg
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal											<0.05				
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011										<0.05				
RPD															0					
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal											<0.05				
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011									<0.05					
RPD																				

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

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 81 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL) )

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory





						PCBs					Inorganics								
						Arsenic	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
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	-	-	mg/kg	%	mg/kg
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal								9.2						
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011							9.4						
RPD													2						
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal								9.2						
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011							8.9		6.4				
RPD													3						

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

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



							Halogenated Benzenes							Halogenated Hydrocarbons									
							Arsenic	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Bromobenzene	4-chlorotoluene	Chlorobenzene	Iodomethane	Bromomethane	1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Total MAH			
							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	
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal																		
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011																	
RPD																							
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal																		
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011																	
RPD																							

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

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 81 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL) )

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory



							MAH					Solvents			SPOCAS			
							Arsenic	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	-
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal													
D05.01	SX_OB_20220405_08_23_SS_Duplicate_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Field_D	EM2206168011												
RPD																		
D05.01	SX_OB_20220405_08_22_SS_Primary_ALS	5/04/2022	EM2206168	ALSE-Melbourne	Normal													
D05.01	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/2022	877551	MGT	Interlab_D	EM2206168011												
RPD																		

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

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 81 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL) )

\*\*\*Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

# TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	D05.0120220415192423_03	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001_01</u>
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ATTACHMENT B: 95% UCL AVE CALCULATIONS

	A	B	C	D	E	F	G	H	I	J	K	L	
1	<b>UCL Statistics for Data Sets with Non-Detects</b>												
2													
3	User Selected Options												
4	Date/Time of Computation			ProUCL 5.115/04/2022 3:49:07 PM									
5	From File			WorkSheet.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				20		Number of Distinct Observations				17		
15									Number of Missing Observations				30
16	Minimum				10		Mean				23.7		
17	Maximum				39		Median				23		
18	SD				8.073		Std. Error of Mean				1.805		
19	Coefficient of Variation				0.341		Skewness				0.238		
20													
21	<b>Normal GOF Test</b>												
22	Shapiro Wilk Test Statistic				0.964		<b>Shapiro Wilk GOF Test</b>						
23	5% Shapiro Wilk Critical Value				0.905		Data appear Normal at 5% Significance Level						
24	Lilliefors Test Statistic				0.127		<b>Lilliefors GOF Test</b>						
25	5% Lilliefors Critical Value				0.192		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				26.82		95% Adjusted-CLT UCL (Chen-1995)				26.77		
31							95% Modified-t UCL (Johnson-1978)				26.84		
32													
33	<b>Gamma GOF Test</b>												
34	A-D Test Statistic				0.269		<b>Anderson-Darling Gamma GOF Test</b>						
35	5% A-D Critical Value				0.743		Detected data appear Gamma Distributed at 5% Significance Level						
36	K-S Test Statistic				0.101		<b>Kolmogorov-Smirnov Gamma GOF Test</b>						
37	5% K-S Critical Value				0.194		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)				8.645		k star (bias corrected MLE)				7.381		
42	Theta hat (MLE)				2.742		Theta star (bias corrected MLE)				3.211		
43	nu hat (MLE)				345.8		nu star (bias corrected)				295.3		
44	MLE Mean (bias corrected)				23.7		MLE Sd (bias corrected)				8.723		
45							Approximate Chi Square Value (0.05)				256.5		
46	Adjusted Level of Significance				0.038		Adjusted Chi Square Value				253.6		
47													
48	<b>Assuming Gamma Distribution</b>												
49	95% Approximate Gamma UCL (use when n>=50))				27.29		95% Adjusted Gamma UCL (use when n<50)				27.59		
50													
51	<b>Lognormal GOF Test</b>												
52	Shapiro Wilk Test Statistic				0.966		<b>Shapiro Wilk Lognormal GOF Test</b>						
53	5% Shapiro Wilk Critical Value				0.905		Data appear Lognormal at 5% Significance Level						
54	Lilliefors Test Statistic				0.1		<b>Lilliefors Lognormal GOF Test</b>						



	A	B	C	D	E	F	G	H	I	J	K	L	
55	5% Lilliefors Critical Value				0.192	Data appear Lognormal at 5% Significance Level							
56	<b>Data appear Lognormal at 5% Significance Level</b>												
57													
58	<b>Lognormal Statistics</b>												
59	Minimum of Logged Data				2.303	Mean of logged Data				3.107			
60	Maximum of Logged Data				3.664	SD of logged Data				0.361			
61													
62	<b>Assuming Lognormal Distribution</b>												
63	95% H-UCL				27.9	90% Chebyshev (MVUE) UCL				29.62			
64	95% Chebyshev (MVUE) UCL				32.28	97.5% Chebyshev (MVUE) UCL				35.97			
65	99% Chebyshev (MVUE) UCL				43.21								
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				26.67	95% Jackknife UCL				26.82			
72	95% Standard Bootstrap UCL				26.6	95% Bootstrap-t UCL				27.22			
73	95% Hall's Bootstrap UCL				26.75	95% Percentile Bootstrap UCL				26.5			
74	95% BCA Bootstrap UCL				26.9								
75	90% Chebyshev(Mean, Sd) UCL				29.12	95% Chebyshev(Mean, Sd) UCL				31.57			
76	97.5% Chebyshev(Mean, Sd) UCL				34.97	99% Chebyshev(Mean, Sd) UCL				41.66			
77													
78	<b>Suggested UCL to Use</b>												
79	95% Student's-t UCL				26.82								
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				20	Number of Distinct Observations				15			
91						Number of Missing Observations				30			
92	Minimum				138	Mean				206.9			
93	Maximum				300	Median				206.5			
94	SD				41.07	Std. Error of Mean				9.184			
95	Coefficient of Variation				0.199	Skewness				0.304			
96													
97	<b>Normal GOF Test</b>												
98	Shapiro Wilk Test Statistic				0.977	<b>Shapiro Wilk GOF Test</b>							
99	5% Shapiro Wilk Critical Value				0.905	Data appear Normal at 5% Significance Level							
100	Lilliefors Test Statistic				0.103	<b>Lilliefors GOF Test</b>							
101	5% Lilliefors Critical Value				0.192	Data appear Normal at 5% Significance Level							
102	<b>Data appear 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				222.8	95% Adjusted-CLT UCL (Chen-1995)				222.7			
107						95% Modified-t UCL (Johnson-1978)				222.9			
108													

	A	B	C	D	E	F	G	H	I	J	K	L
109	<b>Gamma GOF Test</b>											
110	A-D Test Statistic				0.198		<b>Anderson-Darling Gamma GOF Test</b>					
111	5% A-D Critical Value				0.74		Detected data appear Gamma Distributed at 5% Significance Level					
112	K-S Test Statistic				0.0995		<b>Kolmogorov-Smirnov Gamma GOF Test</b>					
113	5% K-S Critical Value				0.193		Detected data appear Gamma Distributed at 5% Significance Level					
114	<b>Detected data appear Gamma Distributed at 5% Significance Level</b>											
115												
116	<b>Gamma Statistics</b>											
117	k hat (MLE)				26.56		k star (bias corrected MLE)				22.61	
118	Theta hat (MLE)				7.789		Theta star (bias corrected MLE)				9.15	
119	nu hat (MLE)				1063		nu star (bias corrected)				904.5	
120	MLE Mean (bias corrected)				206.9		MLE Sd (bias corrected)				43.51	
121							Approximate Chi Square Value (0.05)				835.7	
122	Adjusted Level of Significance				0.038		Adjusted Chi Square Value				830.5	
123												
124	<b>Assuming Gamma Distribution</b>											
125	95% Approximate Gamma UCL (use when n>=50))				223.9		95% Adjusted Gamma UCL (use when n<50)				225.3	
126												
127	<b>Lognormal GOF Test</b>											
128	Shapiro Wilk Test Statistic				0.978		<b>Shapiro Wilk Lognormal GOF Test</b>					
129	5% Shapiro Wilk Critical Value				0.905		Data appear Lognormal at 5% Significance Level					
130	Lilliefors Test Statistic				0.105		<b>Lilliefors Lognormal GOF Test</b>					
131	5% Lilliefors Critical Value				0.192		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				4.927		Mean of logged Data				5.313	
136	Maximum of Logged Data				5.704		SD of logged Data				0.201	
137												
138	<b>Assuming Lognormal Distribution</b>											
139	95% H-UCL				224.9		90% Chebyshev (MVUE) UCL				235	
140	95% Chebyshev (MVUE) UCL				247.7		97.5% Chebyshev (MVUE) UCL				265.4	
141	99% Chebyshev (MVUE) UCL				300							
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				222		95% Jackknife UCL				222.8	
148	95% Standard Bootstrap UCL				221.7		95% Bootstrap-t UCL				223.4	
149	95% Hall's Bootstrap UCL				224		95% Percentile Bootstrap UCL				222	
150	95% BCA Bootstrap UCL				221.8							
151	90% Chebyshev(Mean, Sd) UCL				234.5		95% Chebyshev(Mean, Sd) UCL				246.9	
152	97.5% Chebyshev(Mean, Sd) UCL				264.3		99% Chebyshev(Mean, Sd) UCL				298.3	
153												
154	<b>Suggested UCL to Use</b>											
155	95% Student's-t UCL				222.8							
156												
157	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
158	Recommendations are based upon data size, data distribution, and skewness.											
159	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
160	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
161												

# TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	D05.0120220415192423_03	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001_01</u>
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ATTACHMENT C: LABORATORY CERTIFICATES

Company		AGON Environmental - Tunnel Spoil Testing		Project No		JC0927		Project Manager		Craig Trimbur		Sampler(s)		Emma.S - EP Risk Brandon - Agon							
Address		Unit H76, 63-85 Turner St, Port Melbourne VIC 3207		Project Name		WGTP-Tunnel Ref:20220405042859-Eurofin-14		EDD Format		ESdat		Handed over by		Emma.S.							
Contact Name		Craig Trimbur David Lawson		Analyses Where metals are requested, please specify "Total" or "Filtered" SUITEs can be used to almost SUITE testing Spoil Sample Preparation Suite WGTP-RI-TRH/PAH/Phenols/OCF/PCB/VOC/Vinyl Chloride/ Metals (As, Cd, Cr, Cu, Ni, Pb, Hg, Ag, Sn, Mo, Se, Zn), Cr+I, Cr+II, Total Fluoride/PH PFAS Extended Suite - 0.1-5ug/kg ASLP PH 5 - PFAS 0.01-0.05 ug/l ASLP Reagent - PFAS 0.01-0.05ug/l		Email for Invoice		finance@agonenviro.com.au LabReports.TST@agonenviro.com.au		Email for Results		LabReports.TST@agonenviro.com.au agonenvironmental@esdat.com.au motherhublabresults1@wgtp.com.au Amrit.Kaur@agile-analytics.com.au									
Phone No		+61 400 826 907 (Craig) +61 490 411 004 (David)				Containers		Change container type & size if necessary		Right Turnaround Time (TAT)		Default will be 5 days if not ticked									
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.				500mL Plastic		250mL Plastic		125mL Plastic		200mL Amber Glass		40mL VOA vial		500mL PFAS Bottle		Jar (Glass or HDPE)		Other (Asbestos AS6004, WA Guidelines)	
Purchase Order						Surcharge will apply		<input type="checkbox"/> Overnight (reporting by 9am) *		<input type="checkbox"/> Same day ♦		<input type="checkbox"/> 1 day ♦		<input type="checkbox"/> 2 days ♦		<input type="checkbox"/> 3 days ♦		<input checked="" type="checkbox"/> 5 days (Standard)		<input type="checkbox"/> Other( )	
Quote ID No		Agon WGTP TST				Sample Comments / Dangerous Goods Hazard Warning															
No	Client Sample ID	Sampled Date/Time	Matrix Solid (S) / Wtiter (W)																		
1	SX_OB_20220404_08_18_SS_Primary_EUF	4/04/22	S	X	X	X	X	X													
2	SX_OB_20220404_08_35_SS_Triplicate_EUF	4/04/22	S	X	X	X	X	X													
3	SX_OB_20220404_12_06_SS_Primary_EUF	4/04/22	S	X	X	X	X	X													
4	SX_OB_20220404_16_17_SS_Primary_EUF	4/04/22	S	X	X	X	X	X													
5	SX_OB_20220404_16_19_SS_Duplicate_EUF	4/04/22	S	X	X	X	X	X													
6	SX_OB_20220404_17_05_SR_Rinsate_EUF	4/04/22	W					X													
7	SX_OB_20220404_17_09_SB_Blank_EUF	4/04/22	W					X													
8	SX_OB_20220404_20_05_SS_Primary_EUF	4/04/22	S	X	X	X	X	X													
9	SX_OB_20220405_04_06_SS_Primary_EUF	5/04/22	S	X	X	X	X	X													
10																					
11																					
12																					
13																					
Total Counts				7	7	9	7	7													
Method of Shipment		<input checked="" type="checkbox"/> Courier (#)	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Postal	Name		Signature		Date		Time		Temperature		Report No						
Laboratory Use Only		Received By	SYD   BNE   MEL   PER   ADL   NTL   DRW	Signature	Date	Time	Temperature	Report No													

Chilled: YES  
Temp: 20.4  
-D-2  
20.2

Signature: Emma.S  
Date: 05/04/22  
Time: 10:19am  
Temperature: 20.2

Sultordh  
877250

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 **877250-S**  
Project name **20220405042859-Eurofin-14**  
Project ID **JC0927**  
Received Date **Apr 05, 2022**

Client Sample ID			SX_OB_20220 404_08_18_SS _Primary_EUF	SX_OB_20220 404_08_35_SS _Triplicate_EU F	SX_OB_20220 404_12_06_SS _Primary_EUF	SX_OB_20220 404_16_17_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0007203	M22- Ap0007204	M22- Ap0007205	M22- Ap0007206
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 04, 2022	Apr 04, 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 404_08_18_SS _Primary_EUF	SX_OB_20220 404_08_35_SS _Triplicate_EU F	SX_OB_20220 404_12_06_SS _Primary_EUF	SX_OB_20220 404_16_17_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0007203	M22- Ap0007204	M22- Ap0007205	M22- Ap0007206
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 04, 2022	Apr 04, 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	%	81	101	125	125
Toluene-d8 (surr.)	1	%	98	111	50	125
<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 404_08_18_SS _Primary_EUF	SX_OB_20220 404_08_35_SS _Triplicate_EU F	SX_OB_20220 404_12_06_SS _Primary_EUF	SX_OB_20220 404_16_17_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0007203	M22- Ap0007204	M22- Ap0007205	M22- Ap0007206
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 04, 2022	Apr 04, 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	%	54	78	66	61
p-Terphenyl-d14 (surr.)	1	%	59	80	65	91
<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	%	121	85	76	94
Tetrachloro-m-xylene (surr.)	1	%	52	103	84	63

Client Sample ID			SX_OB_20220 404_08_18_SS _Primary_EUF	SX_OB_20220 404_08_35_SS _TriPLICATE_EU F	SX_OB_20220 404_12_06_SS _Primary_EUF	SX_OB_20220 404_16_17_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0007203	M22- Ap0007204	M22- Ap0007205	M22- Ap0007206
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 04, 2022	Apr 04, 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	%	121	85	76	94
Tetrachloro-m-xylene (surr.)	1	%	52	103	84	63
<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	%	87	65	92	90
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	290	360
<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	8.6	8.6	8.6	8.4
<b>% Moisture</b>						
% Moisture	1	%	26	25	30	32
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	18	19	33	39
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	140	130	150	140
Copper	5	mg/kg	75	71	72	77
Lead	5	mg/kg	< 5	< 5	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1



Client Sample ID			SX_OB_20220 404_08_18_SS _Primary_EUF	SX_OB_20220 404_08_35_SS _Triplicate_EU F	SX_OB_20220 404_12_06_SS _Primary_EUF	SX_OB_20220 404_16_17_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0007203	M22- Ap0007204	M22- Ap0007205	M22- Ap0007206
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 04, 2022	Apr 04, 2022
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	230	230	220	250
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	120	120	140	150
<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	%	92	96	89	88
13C5-PFPeA (surr.)	1	%	86	96	82	84
13C5-PFHxA (surr.)	1	%	79	81	80	77
13C4-PFHpA (surr.)	1	%	82	81	76	71
13C8-PFOA (surr.)	1	%	84	79	84	77
13C5-PFNA (surr.)	1	%	67	76	70	50
13C6-PFDA (surr.)	1	%	92	76	81	69
13C2-PFUnDA (surr.)	1	%	119	103	94	102
13C2-PFDoDA (surr.)	1	%	58	77	66	68
13C2-PFTeDA (surr.)	1	%	86	88	85	78
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	97	101	91	82
D3-N-MeFOSA (surr.)	1	%	87	70	82	86
D5-N-EtFOSA (surr.)	1	%	88	83	89	87
D7-N-MeFOSE (surr.)	1	%	77	89	84	84
D9-N-EtFOSE (surr.)	1	%	87	84	86	80
D5-N-EtFOSAA (surr.)	1	%	68	87	83	85
D3-N-MeFOSAA (surr.)	1	%	83	89	109	85

Client Sample ID			SX_OB_20220 404_08_18_SS _Primary_EUF	SX_OB_20220 404_08_35_SS _TriPLICATE_EU F	SX_OB_20220 404_12_06_SS _Primary_EUF	SX_OB_20220 404_16_17_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0007203	M22- Ap0007204	M22- Ap0007205	M22- Ap0007206
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 04, 2022	Apr 04, 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	%	69	71	74	75
18O2-PFHxS (surr.)	1	%	81	76	91	88
13C8-PFOS (surr.)	1	%	83	76	87	94
<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	%	60	62	66	66
13C2-6:2 FTSA (surr.)	1	%	58	76	60	70
13C2-8:2 FTSA (surr.)	1	%	117	94	104	98
13C2-10:2 FTSA (surr.)	1	%	75	89	85	105
<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 404_16_19_SS _Duplicate_EU F	SX_OB_20220 404_20_05_SS _Primary_EUF	SX_OB_20220 405_04_06_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0007207	M22- Ap0007210	M22- Ap0007211
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 05, 2022
Test/Reference	LOR	Unit			
<b>Total Recoverable Hydrocarbons</b>					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	32	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20

Client Sample ID			SX_OB_20220 404_16_19_SS Duplicate_EU F	SX_OB_20220 404_20_05_SS Primary_EUF	SX_OB_20220 405_04_06_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0007207	M22- Ap0007210	M22- Ap0007211
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 05, 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
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100
<b>Volatile Organics</b>					
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
<b>Volatile Organics</b>					
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			SX_OB_20220 404_16_19_SS Duplicate_EU F	SX_OB_20220 404_20_05_SS Primary_EUF	SX_OB_20220 405_04_06_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0007207	M22- Ap0007210	M22- Ap0007211
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 05, 2022
Test/Reference	LOR	Unit			
<b>Volatiles Organics</b>					
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	90	116	96
Toluene-d8 (surr.)	1	%	99	131	98
<b>Polycyclic Aromatic Hydrocarbons</b>					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	110	55	99
p-Terphenyl-d14 (surr.)	1	%	92	72	110

Client Sample ID			SX_OB_20220 404_16_19_SS Duplicate_EU F	SX_OB_20220 404_20_05_SS Primary_EUF	SX_OB_20220 405_04_06_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0007207	M22- Ap0007210	M22- Ap0007211
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 05, 2022
Test/Reference	LOR	Unit			
<b>Organochlorine Pesticides</b>					
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	92	97	99
Tetrachloro-m-xylene (surr.)	1	%	127	94	139
<b>Polychlorinated Biphenyls</b>					
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	92	97	99
Tetrachloro-m-xylene (surr.)	1	%	127	94	139
<b>Phenols (Halogenated)</b>					
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1

Client Sample ID			SX_OB_20220 404_16_19_SS Duplicate_EU F	SX_OB_20220 404_20_05_SS Primary_EUF	SX_OB_20220 405_04_06_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0007207	M22- Ap0007210	M22- Ap0007211
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 05, 2022
Test/Reference	LOR	Unit			
<b>Phenols (non-Halogenated)</b>					
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	76	88	83
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20
<b>Chromium (hexavalent)</b>					
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1
Cyanide (total)	5	mg/kg	< 5	< 5	< 5
Fluoride (Total)	100	mg/kg	440	360	< 100
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.7	8.6	8.6
% Moisture	1	%	30	29	30
<b>Heavy Metals</b>					
Arsenic	2	mg/kg	35	24	20
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	150	120	140
Copper	5	mg/kg	79	65	76
Lead	5	mg/kg	< 5	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5
Nickel	5	mg/kg	250	210	260
Selenium	2	mg/kg	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10
Zinc	5	mg/kg	150	110	150
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>					
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
Perfluorononanoic acid (PFNA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	91	93	92
13C5-PFPeA (surr.)	1	%	88	87	84
13C5-PFHxA (surr.)	1	%	80	84	82

Client Sample ID			SX_OB_20220 404_16_19_SS Duplicate_EU F	SX_OB_20220 404_20_05_SS Primary_EUF	SX_OB_20220 405_04_06_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0007207	M22- Ap0007210	M22- Ap0007211
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 05, 2022
Test/Reference	LOR	Unit			
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>					
13C4-PFHpA (surr.)	1	%	75	82	80
13C8-PFOA (surr.)	1	%	84	80	85
13C5-PFNA (surr.)	1	%	72	61	77
13C6-PFDA (surr.)	1	%	86	114	74
13C2-PFUnDA (surr.)	1	%	103	94	107
13C2-PFDoDA (surr.)	1	%	66	76	69
13C2-PFTeDA (surr.)	1	%	83	83	83
<b>Perfluoroalkyl sulfonamido substances</b>					
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	98	91	91
D3-N-MeFOSA (surr.)	1	%	80	77	80
D5-N-EtFOSA (surr.)	1	%	92	96	88
D7-N-MeFOSE (surr.)	1	%	88	95	88
D9-N-EtFOSE (surr.)	1	%	83	86	84
D5-N-EtFOSAA (surr.)	1	%	76	85	97
D3-N-MeFOSAA (surr.)	1	%	98	111	76
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>					
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	82	80	74
18O2-PFHxS (surr.)	1	%	81	105	99
13C8-PFOS (surr.)	1	%	82	83	84
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	61	61	62
13C2-6:2 FTSA (surr.)	1	%	65	67	63

<b>Client Sample ID</b>			<b>SX_OB_20220 404_16_19_SS Duplicate_EU F</b>	<b>SX_OB_20220 404_20_05_SS _Primary_EUF</b>	<b>SX_OB_20220 405_04_06_SS _Primary_EUF</b>
<b>Sample Matrix</b>			<b>Soil</b>	<b>Soil</b>	<b>Soil</b>
<b>Eurofins Sample No.</b>			<b>M22- Ap0007207</b>	<b>M22- Ap0007210</b>	<b>M22- Ap0007211</b>
<b>Date Sampled</b>			<b>Apr 04, 2022</b>	<b>Apr 04, 2022</b>	<b>Apr 05, 2022</b>
Test/Reference	LOR	Unit			
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>					
13C2-8:2 FTSA (surr.)	1	%	101	114	108
13C2-10:2 FTSA (surr.)	1	%	98	82	60
<b>PFASs Summations</b>					
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 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	Apr 06, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Apr 06, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Apr 06, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	Apr 06, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	Apr 06, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Apr 06, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	Apr 06, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	Apr 06, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Apr 06, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Apr 06, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	Apr 06, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	Apr 06, 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	Apr 07, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Apr 06, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	Apr 06, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Apr 05, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 06, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 06, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 06, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 06, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 05, 2022	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 5, 2022 2:30 PM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	877250	<b>Due:</b>	Apr 12, 2022
<b>Project Name:</b>	WGTP-Tunnel Ref:20220405042859-Eurofin-14	<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_20220404_08_18_S_S_Primary_EU F	Apr 04, 2022		Soil	M22-Ap0007203		X	X	X
2	SX_OB_20220404_08_35_S_S_Triplicate_EU F	Apr 04, 2022		Soil	M22-Ap0007204		X	X	X
3	SX_OB_20220404_12_06_S_S_Primary_EU F	Apr 04, 2022		Soil	M22-Ap0007205		X	X	X

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<b>Project Name:</b>	WGTP-Tunnel Ref:20220405042859-Eurofin-14	<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_20220404_16_17_S_S_Primary_EU_F	Apr 04, 2022		Soil	M22-Ap0007206		X	X	X
5	SX_OB_20220404_16_19_S_S_Duplicate_EUF	Apr 04, 2022		Soil	M22-Ap0007207		X	X	X
6	SX_OB_20220404_17_05_S_R_Rinsate_EU_F	Apr 04, 2022		Water	M22-Ap0007208			X	
7	SX_OB_20220404_17_09_S	Apr 04, 2022		Water	M22-Ap0007209			X	

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<b>Project Name:</b>	WGTP-Tunnel Ref:20220405042859-Eurofin-14	<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

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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>									
	B_Blank_EUF								
8	SX_OB_20220404_20_05_S_S_Primary_EUF	Apr 04, 2022		Soil	M22-Ap0007210		X	X	X
9	SX_OB_20220405_04_06_S_S_Primary_EUF	Apr 05, 2022		Soil	M22-Ap0007211		X	X	X
10	SX_OB_20220404_08_18_S_S_Primary_EUF	Apr 04, 2022		AUS Leachate - pH 5.0	M22-Ap0007212	X		X	
11	SX_OB_20220404_08_18_S_S_Primary_EUF	Apr 04, 2022		AUS Leachate	M22-	X		X	

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<b>Project Name:</b>	WGTP-Tunnel Ref:20220405042859-Eurofin-14	<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>									
	404_08_35_S S_Triplicate_E UF			- pH 5.0	Ap0007213				
12	SX_OB_20220 404_12_06_S S_Primary_EU F	Apr 04, 2022		AUS Leachate - pH 5.0	M22- Ap0007214	X		X	
13	SX_OB_20220 404_16_17_S S_Primary_EU F	Apr 04, 2022		AUS Leachate - pH 5.0	M22- Ap0007215	X		X	
14	SX_OB_20220 404_16_19_S S_Duplicate_E	Apr 04, 2022		AUS Leachate - pH 5.0	M22- Ap0007216	X		X	

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<b>Project Name:</b>	WGTP-Tunnel Ref:20220405042859-Eurofin-14	<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>									
	UF								
15	SX_OB_20220404_20_05_S_S_Primary_EU_F	Apr 04, 2022		AUS Leachate - pH 5.0	M22-Ap0007219	X		X	
16	SX_OB_20220405_04_06_S_S_Primary_EU_F	Apr 05, 2022		AUS Leachate - pH 5.0	M22-Ap0007220	X		X	
17	SX_OB_20220404_08_18_S_S_Primary_EU_F	Apr 04, 2022		AUS Leachate - Reagent Water	M22-Ap0007221	X		X	
18	SX_OB_20220	Apr 04, 2022		AUS Leachate	M22-	X		X	

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<b>Project Name:</b>	WGTP-Tunnel Ref:20220405042859-Eurofin-14	<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>									
	404_08_35_S S_Triplicate_E UF			- Reagent Water	Ap0007222				
19	SX_OB_20220 404_12_06_S S_Primary_EU F	Apr 04, 2022		AUS Leachate - Reagent Water	M22- Ap0007223	X		X	
20	SX_OB_20220 404_16_17_S S_Primary_EU F	Apr 04, 2022		AUS Leachate - Reagent Water	M22- Ap0007224	X		X	
21	SX_OB_20220 404_16_19_S S_Duplicate_E	Apr 04, 2022		AUS Leachate - Reagent Water	M22- Ap0007225	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 5, 2022 2:30 PM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	877250	<b>Due:</b>	Apr 12, 2022
<b>Project Name:</b>	WGTP-Tunnel Ref:20220405042859-Eurofin-14	<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>									
	UF								
22	SX_OB_20220404_20_05_S_S_Primary_EU F	Apr 04, 2022		AUS Leachate - Reagent Water	M22-Ap0007228	X		X	
23	SX_OB_20220405_04_06_S_S_Primary_EU F	Apr 05, 2022		AUS Leachate - Reagent Water	M22-Ap0007229	X		X	
<b>Test Counts</b>						14	7	23	7



## Internal Quality Control Review and Glossary

### General

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

### Holding Times

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

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

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

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

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

### Units

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

### Terms

<b>APHA</b>	American Public Health Association
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
<b>NCP</b>	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>TBTO</b>	Tributyltin oxide ( <i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 5.4
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

### QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

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

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

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

### QC Data General Comments

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

**Quality Control Results**

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons</b>							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
<b>Method Blank</b>							
<b>Volatile Organics</b>							
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Volatile Organics</b>							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Benzene	mg/kg	< 0.1			0.1	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	

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

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

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Zinc	mg/kg	< 5		5	Pass	
<b>Method Blank</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA)	ug/kg	< 5		5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5		5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5		5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5		5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5		5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5		5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5		5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5		5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5		5	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 5		5	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 5		5	Pass	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5		5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5		5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5		5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/kg	< 5		5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/kg	< 5		5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10		10	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 10		10	Pass	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>						
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5		5	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 5		5	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 5		5	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 5		5	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5		5	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 5		5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5		5	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 5		5	Pass	
<b>Method Blank</b>						
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5		5	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/kg	< 10		10	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5		5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5		5	Pass	
<b>LCS - % Recovery</b>						
<b>Total Recoverable Hydrocarbons</b>						
TRH C6-C9	%	94		70-130	Pass	
TRH C10-C14	%	112		70-130	Pass	
Naphthalene	%	75		70-130	Pass	
TRH C6-C10	%	93		70-130	Pass	
TRH >C10-C16	%	118		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Volatile Organics</b>						
1.1-Dichloroethene	%	81		70-130	Pass	
1.1.1-Trichloroethane	%	80		70-130	Pass	
1.2-Dichlorobenzene	%	74		70-130	Pass	
1.2-Dichloroethane	%	101		70-130	Pass	
Benzene	%	71		70-130	Pass	
Ethylbenzene	%	88		70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	73			70-130	Pass	
Toluene	%	71			70-130	Pass	
Trichloroethene	%	90			70-130	Pass	
Xylenes - Total*	%	73			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	%	96			70-130	Pass	
Acenaphthylene	%	89			70-130	Pass	
Anthracene	%	81			70-130	Pass	
Benz(a)anthracene	%	80			70-130	Pass	
Benzo(a)pyrene	%	74			70-130	Pass	
Benzo(b&i)fluoranthene	%	95			70-130	Pass	
Benzo(g,h,i)perylene	%	103			70-130	Pass	
Benzo(k)fluoranthene	%	95			70-130	Pass	
Chrysene	%	105			70-130	Pass	
Dibenz(a,h)anthracene	%	103			70-130	Pass	
Fluoranthene	%	76			70-130	Pass	
Fluorene	%	78			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	104			70-130	Pass	
Naphthalene	%	80			70-130	Pass	
Phenanthrene	%	102			70-130	Pass	
Pyrene	%	80			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Organochlorine Pesticides</b>							
Chlordanes - Total	%	83			70-130	Pass	
4,4'-DDD	%	123			70-130	Pass	
4,4'-DDE	%	123			70-130	Pass	
4,4'-DDT	%	126			70-130	Pass	
a-HCH	%	90			70-130	Pass	
Aldrin	%	123			70-130	Pass	
b-HCH	%	118			70-130	Pass	
d-HCH	%	116			70-130	Pass	
Dieldrin	%	100			70-130	Pass	
Endosulfan I	%	78			70-130	Pass	
Endosulfan II	%	77			70-130	Pass	
Endosulfan sulphate	%	112			70-130	Pass	
Endrin	%	115			70-130	Pass	
Endrin aldehyde	%	94			70-130	Pass	
Endrin ketone	%	87			70-130	Pass	
g-HCH (Lindane)	%	84			70-130	Pass	
Heptachlor	%	81			70-130	Pass	
Heptachlor epoxide	%	85			70-130	Pass	
Hexachlorobenzene	%	93			70-130	Pass	
Methoxychlor	%	103			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polychlorinated Biphenyls</b>							
Aroclor-1260	%	100			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Phenols (Halogenated)</b>							
2-Chlorophenol	%	94			25-140	Pass	
2,4-Dichlorophenol	%	90			25-140	Pass	
2,4,5-Trichlorophenol	%	79			25-140	Pass	
2,4,6-Trichlorophenol	%	43			25-140	Pass	
2,6-Dichlorophenol	%	79			25-140	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
4-Chloro-3-methylphenol	%	98		25-140	Pass	
Pentachlorophenol	%	75		25-140	Pass	
Tetrachlorophenols - Total	%	34		25-140	Pass	
<b>LCS - % Recovery</b>						
<b>Phenols (non-Halogenated)</b>						
2-Cyclohexyl-4,6-dinitrophenol	%	49		25-140	Pass	
2-Methyl-4,6-dinitrophenol	%	55		25-140	Pass	
2-Nitrophenol	%	85		25-140	Pass	
2,4-Dimethylphenol	%	100		25-140	Pass	
2,4-Dinitrophenol	%	47		25-140	Pass	
2-Methylphenol (o-Cresol)	%	84		25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	90		25-140	Pass	
4-Nitrophenol	%	79		25-140	Pass	
Dinoseb	%	63		25-140	Pass	
Phenol	%	102		25-140	Pass	
<b>LCS - % Recovery</b>						
Chromium (hexavalent)	%	88		70-130	Pass	
Cyanide (total)	%	96		70-130	Pass	
Fluoride (Total)	%	111		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Heavy Metals</b>						
Arsenic	%	120		80-120	Pass	
Cadmium	%	115		80-120	Pass	
Chromium	%	119		80-120	Pass	
Copper	%	117		80-120	Pass	
Lead	%	116		80-120	Pass	
Mercury	%	120		80-120	Pass	
Molybdenum	%	118		80-120	Pass	
Nickel	%	117		80-120	Pass	
Selenium	%	118		80-120	Pass	
Silver	%	115		80-120	Pass	
Tin	%	117		80-120	Pass	
Zinc	%	113		80-120	Pass	
<b>LCS - % Recovery</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA)	%	94		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	93		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	90		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	96		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	90		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	106		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	108		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	101		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	86		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	107		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	109		50-150	Pass	
<b>LCS - % Recovery</b>						
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA)	%	101		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	91		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	80		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	91		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	99		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	78		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	112			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	88			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	122			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	116			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	102			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	97			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	64			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	118			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	123			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)	%	110			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	106			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	113			50-150	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Total Recoverable Hydrocarbons</b>				Result 1				
TRH C6-C9	M22-Ap0005324	NCP	%	73		70-130	Pass	
TRH C10-C14	M22-Ap0009008	NCP	%	96		70-130	Pass	
Naphthalene	M22-Ap0005324	NCP	%	71		70-130	Pass	
TRH C6-C10	M22-Ap0005324	NCP	%	71		70-130	Pass	
TRH >C10-C16	M22-Ap0009008	NCP	%	104		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Volatile Organics</b>				Result 1				
1.1-Dichloroethene	M22-Ap0005324	NCP	%	74		70-130	Pass	
1.1.1-Trichloroethane	M22-Ap0005324	NCP	%	77		70-130	Pass	
1.2-Dichlorobenzene	M22-Ap0005324	NCP	%	96		70-130	Pass	
1.2-Dichloroethane	M22-Ap0005324	NCP	%	99		70-130	Pass	
Benzene	M22-Ap0005324	NCP	%	84		70-130	Pass	
Ethylbenzene	M22-Ap0005324	NCP	%	81		70-130	Pass	
m&p-Xylenes	M22-Ap0005324	NCP	%	107		70-130	Pass	
o-Xylene	M22-Ap0005324	NCP	%	81		70-130	Pass	
Toluene	M22-Ap0005324	NCP	%	81		70-130	Pass	
Trichloroethene	M22-Ap0005324	NCP	%	81		70-130	Pass	
Xylenes - Total*	M22-Ap0005324	NCP	%	98		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1				
Acenaphthene	M22-Ap0009357	NCP	%	87		70-130	Pass	
Acenaphthylene	M22-Ap0009357	NCP	%	84		70-130	Pass	
Anthracene	M22-Ap0009357	NCP	%	71		70-130	Pass	
Benzo(a)anthracene	M22-Ap0009357	NCP	%	96		70-130	Pass	
Benzo(a)pyrene	M22-Ap0009357	NCP	%	78		70-130	Pass	
Benzo(b&j)fluoranthene	M22-Ap0009357	NCP	%	79		70-130	Pass	
Benzo(g,h,i)perylene	M22-Ap0009357	NCP	%	107		70-130	Pass	
Benzo(k)fluoranthene	M22-Ap0009357	NCP	%	79		70-130	Pass	
Chrysene	M22-Ap0009357	NCP	%	86		70-130	Pass	
Dibenz(a,h)anthracene	M22-Ap0009357	NCP	%	103		70-130	Pass	
Fluoranthene	M22-Ap0009357	NCP	%	81		70-130	Pass	
Fluorene	M22-Ap0009357	NCP	%	76		70-130	Pass	
Indeno(1.2.3-cd)pyrene	M22-Ap0009357	NCP	%	102		70-130	Pass	
Naphthalene	M22-Ap0009357	NCP	%	81		70-130	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Phenanthrene	M22-Ap0009357	NCP	%	90		70-130	Pass	
Pyrene	M22-Ap0009357	NCP	%	83		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Organochlorine Pesticides</b>				Result 1				
Chlordanes - Total	M22-Ap0010610	NCP	%	99		70-130	Pass	
4.4'-DDD	M22-Ap0010610	NCP	%	114		70-130	Pass	
4.4'-DDE	M22-Ap0010610	NCP	%	102		70-130	Pass	
4.4'-DDT	M22-Ap0010610	NCP	%	87		70-130	Pass	
a-HCH	M22-Ap0010610	NCP	%	78		70-130	Pass	
Aldrin	M22-Ap0010610	NCP	%	84		70-130	Pass	
b-HCH	M22-Ap0010610	NCP	%	85		70-130	Pass	
d-HCH	M22-Ap0010610	NCP	%	85		70-130	Pass	
Dieldrin	M22-Ap0010610	NCP	%	118		70-130	Pass	
Endosulfan I	M22-Ap0010610	NCP	%	104		70-130	Pass	
Endosulfan II	M22-Ap0010610	NCP	%	104		70-130	Pass	
Endosulfan sulphate	M22-Ap0010610	NCP	%	90		70-130	Pass	
Endrin	M22-Ap0010610	NCP	%	97		70-130	Pass	
Endrin aldehyde	M22-Ap0010610	NCP	%	92		70-130	Pass	
Endrin ketone	M22-Ap0010610	NCP	%	108		70-130	Pass	
g-HCH (Lindane)	M22-Ap0010610	NCP	%	127		70-130	Pass	
Heptachlor	M22-Ap0010610	NCP	%	123		70-130	Pass	
Heptachlor epoxide	M22-Ap0010610	NCP	%	78		70-130	Pass	
Hexachlorobenzene	M22-Ap0010610	NCP	%	123		70-130	Pass	
Methoxychlor	M22-Ap0010610	NCP	%	104		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (Halogenated)</b>				Result 1				
2-Chlorophenol	M22-Ap0009357	NCP	%	98		30-130	Pass	
2.4-Dichlorophenol	M22-Ap0009357	NCP	%	95		30-130	Pass	
2.4.5-Trichlorophenol	M22-Ap0009357	NCP	%	75		30-130	Pass	
2.4.6-Trichlorophenol	M22-Ap0009357	NCP	%	104		30-130	Pass	
2.6-Dichlorophenol	M22-Ap0009357	NCP	%	77		30-130	Pass	
4-Chloro-3-methylphenol	M22-Ap0009357	NCP	%	98		30-130	Pass	
Pentachlorophenol	M22-Ap0009357	NCP	%	75		30-130	Pass	
Tetrachlorophenols - Total	M22-Ap0009357	NCP	%	96		30-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (non-Halogenated)</b>				Result 1				
2-Cyclohexyl-4.6-dinitrophenol	M22-Ap0009357	NCP	%	89		30-130	Pass	
2-Methyl-4.6-dinitrophenol	M22-Ap0009357	NCP	%	72		30-130	Pass	
2-Nitrophenol	M22-Ap0009357	NCP	%	91		30-130	Pass	
2.4-Dimethylphenol	M22-Ap0009357	NCP	%	91		30-130	Pass	
2.4-Dinitrophenol	M22-Ap0009357	NCP	%	74		30-130	Pass	
2-Methylphenol (o-Cresol)	M22-Ap0009357	NCP	%	83		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-Ap0009357	NCP	%	89		30-130	Pass	
4-Nitrophenol	M22-Ap0009357	NCP	%	90		30-130	Pass	
Dinoseb	M22-Ap0009357	NCP	%	71		30-130	Pass	
Phenol	M22-Ap0009357	NCP	%	110		30-130	Pass	
<b>Spike - % Recovery</b>								
				Result 1				
Chromium (hexavalent)	M22-Ap0011441	NCP	%	85		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Chromium	M22-Ap0004296	NCP	%	123		75-125	Pass	
Nickel	M22-Ap0004296	NCP	%	111		75-125	Pass	
Zinc	M22-Ap0004225	NCP	%	115		75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1				
Perfluorobutanoic acid (PFBA)	M22-Ap0007203	CP	%	82		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ap0007203	CP	%	86		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ap0007203	CP	%	81		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ap0007203	CP	%	81		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ap0007203	CP	%	90		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ap0007203	CP	%	95		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ap0007203	CP	%	96		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0007203	CP	%	93		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ap0007203	CP	%	98		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0007203	CP	%	99		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0007203	CP	%	98		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1				
Perfluorooctane sulfonamide (FOSA)	M22-Ap0007203	CP	%	96		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0007203	CP	%	75		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0007203	CP	%	92		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0007203	CP	%	92		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0007203	CP	%	89		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ap0007203	CP	%	99		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0007203	CP	%	111		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>				Result 1				
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0007203	CP	%	85		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ap0007203	CP	%	148		50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0007203	CP	%	134		50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0007203	CP	%	77		50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0007203	CP	%	85		50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0007203	CP	%	63		50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0007203	CP	%	112		50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0007203	CP	%	132		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-Ap0007203	CP	%	90		50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0007203	CP	%	121		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0007203	CP	%	109			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0007203	CP	%	91			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>Polychlorinated Biphenyls</b>				Result 1					
Aroclor-1016	B22-Ap0006516	NCP	%	77			70-130	Pass	
Aroclor-1260	B22-Ap0006516	NCP	%	102			70-130	Pass	
<b>Spike - % Recovery</b>									
				Result 1					
Fluoride (Total)	M22-Ap0007205	CP	%	85			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Heavy Metals</b>				Result 1					
Arsenic	M22-Ap0007207	CP	%	87			75-125	Pass	
Cadmium	M22-Ap0007207	CP	%	110			75-125	Pass	
Copper	M22-Ap0007207	CP	%	82			75-125	Pass	
Lead	M22-Ap0007207	CP	%	104			75-125	Pass	
Mercury	M22-Ap0007207	CP	%	113			75-125	Pass	
Molybdenum	M22-Ap0007207	CP	%	107			75-125	Pass	
Selenium	M22-Ap0007207	CP	%	95			75-125	Pass	
Silver	M22-Ap0007207	CP	%	117			75-125	Pass	
Tin	M22-Ap0007207	CP	%	102			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Total Recoverable Hydrocarbons</b>				Result 1	Result 2	RPD			
TRH C10-C14	M22-Ap0006387	NCP	mg/kg	2000	2100	4.0	30%	Pass	
TRH C15-C28	M22-Ap0006387	NCP	mg/kg	200	210	4.0	30%	Pass	
TRH C29-C36	M22-Ap0006387	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C10-C16	M22-Ap0006387	NCP	mg/kg	1500	1600	5.0	30%	Pass	
TRH >C16-C34	M22-Ap0006387	NCP	mg/kg	170	180	4.0	30%	Pass	
TRH >C34-C40	M22-Ap0006387	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
<b>Duplicate</b>									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	M22-Ap0010607	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Cyanide (total)	M22-Ap0010607	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Ap0011437	NCP	pH Units	9.7	9.7	pass	30%	Pass	
% Moisture	B22-Ap0006525	NCP	%	22	22	<1	30%	Pass	
<b>Duplicate</b>									
				Result 1	Result 2	RPD			
Fluoride (Total)	M22-Ap0007206	CP	mg/kg	360	360	1.0	30%	Pass	
<b>Duplicate</b>									
<b>Total Recoverable Hydrocarbons</b>				Result 1	Result 2	RPD			
TRH C6-C9	M22-Ap0007207	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M22-Ap0007207	CP	mg/kg	< 20	< 20	<1	30%	Pass	
<b>Duplicate</b>									
<b>Volatile Organics</b>				Result 1	Result 2	RPD			
Hexachlorobutadiene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.1-Dichloroethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trichlorobenzene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1-Dichloroethene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1-Trichloroethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1.2-Tetrachloroethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2-Trichloroethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2.2-Tetrachloroethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dibromoethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichlorobenzene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloroethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloropropane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.3-Trichloropropane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trimethylbenzene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichlorobenzene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichloropropane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3.5-Trimethylbenzene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.4-Dichlorobenzene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzene	M22-Ap0007207	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Bromobenzene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	M22-Ap0007207	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	M22-Ap0007207	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	M22-Ap0007207	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	M22-Ap0007207	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1.2-Dichloroethene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.3-Dichloropropene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-Ap0007207	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total*	M22-Ap0007207	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M22-Ap0007207	CP	mg/kg	35	35	1.0	30%	Pass
Cadmium	M22-Ap0007207	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M22-Ap0007207	CP	mg/kg	150	150	2.0	30%	Pass
Copper	M22-Ap0007207	CP	mg/kg	79	80	2.0	30%	Pass
Lead	M22-Ap0007207	CP	mg/kg	< 5	< 5	<1	30%	Pass
Mercury	M22-Ap0007207	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M22-Ap0007207	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M22-Ap0007207	CP	mg/kg	250	260	2.0	30%	Pass
Selenium	M22-Ap0007207	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M22-Ap0007207	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-Ap0007207	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M22-Ap0007207	CP	mg/kg	150	150	2.0	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ap0007207	CP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0007207	CP	ug/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass

<b>Duplicate</b>								
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>				Result 1	Result 2	RPD		
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0007207	CP	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-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0007207	CP	ug/kg	< 10	< 10	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0007207	CP	ug/kg	< 5	< 5	<1	30%	Pass
<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Fluoride (Total)	M22-Ap0007210	CP	mg/kg	360	300	21	30%	Pass
<b>Duplicate</b>								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1	Result 2	RPD		
Acenaphthene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&i)fluoranthene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
<b>Duplicate</b>								
<b>Organochlorine Pesticides</b>				Result 1	Result 2	RPD		
Chlordanes - Total	M22-Ap0007211	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4.4'-DDD	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4.4'-DDE	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4.4'-DDT	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
g-HCH (Lindane)	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-Ap0007211	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M22-Ap0007211	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-Ap0007211	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-Ap0007211	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-Ap0007211	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-Ap0007211	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-Ap0007211	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-Ap0007211	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-Ap0007211	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M22-Ap0007211	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M22-Ap0007211	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-Ap0007211	CP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-Ap0007211	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-Ap0007211	CP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	M22-Ap0007211	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M22-Ap0007211	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-Ap0007211	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	M22-Ap0007211	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-Ap0007211	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-Ap0007211	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M22-Ap0007211	CP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-Ap0007211	CP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-Ap0007211	CP	mg/kg	< 0.5	< 0.5	<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).

**Authorised by:**

Michael Cassidy	Analytical Services Manager
Mary Makarios	Senior Analyst (NSW)
Linda Chouman	Senior Analyst (NSW)
Scott Beddoes	Senior Analyst (NSW)
Edward Lee	Senior Analyst (VIC)
Joseph Edouard	Senior Analyst (VIC)
Harry Bacalis	Senior Analyst (NSW)



**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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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 **877250-W**  
Project name **20220405042859-Eurofin-14**  
Project ID **JC0927**  
Received Date **Apr 05, 2022**

Client Sample ID			SX_OB_20220 404_17_05_SR _Rinsate_EUF	SX_OB_20220 404_17_09_SB _Blank_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22- Ap0007208	M22- Ap0007209
Date Sampled			Apr 04, 2022	Apr 04, 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	%	65	63
13C5-PFPeA (surr.)	1	%	71	68
13C5-PFHxA (surr.)	1	%	75	72
13C4-PFHpA (surr.)	1	%	67	68
13C8-PFOA (surr.)	1	%	63	62
13C5-PFNA (surr.)	1	%	57	58
13C6-PFDA (surr.)	1	%	63	64
13C2-PFUnDA (surr.)	1	%	48	49
13C2-PFDoDA (surr.)	1	%	47	47
13C2-PFTeDA (surr.)	1	%	30	30
<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	%	64	61

Client Sample ID			SX_OB_20220 404_17_05_SR _Rinsate_EUF	SX_OB_20220 404_17_09_SB _Blank_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22- Ap0007208	M22- Ap0007209
Date Sampled			Apr 04, 2022	Apr 04, 2022
Test/Reference	LOR	Unit		
<b>Perfluoroalkyl sulfonamido substances</b>				
D3-N-MeFOSA (surr.)	1	%	72	71
D5-N-EtFOSA (surr.)	1	%	98	95
D7-N-MeFOSE (surr.)	1	%	43	39
D9-N-EtFOSE (surr.)	1	%	52	51
D5-N-EtFOSAA (surr.)	1	%	25	24
D3-N-MeFOSAA (surr.)	1	%	27	21
<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	%	82	78
18O2-PFHxS (surr.)	1	%	74	71
13C8-PFOS (surr.)	1	%	64	63
<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	%	31	32
13C2-6:2 FTSA (surr.)	1	%	44	46
13C2-8:2 FTSA (surr.)	1	%	53	50
13C2-10:2 FTSA (surr.)	1	%	47	47
<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	Apr 05, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Apr 05, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Apr 05, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Apr 05, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Apr 05, 2022	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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<b>Project Name:</b>	WGTP-Tunnel Ref:20220405042859-Eurofin-14	<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_20220404_08_18_S_S_Primary_EU F	Apr 04, 2022		Soil	M22-Ap0007203		X	X	X
2	SX_OB_20220404_08_35_S_S_Triplicate_EU F	Apr 04, 2022		Soil	M22-Ap0007204		X	X	X
3	SX_OB_20220404_12_06_S_S_Primary_EU F	Apr 04, 2022		Soil	M22-Ap0007205		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_20220404_16_17_S_S_Primary_EU_F	Apr 04, 2022		Soil	M22-Ap0007206		X	X	X
5	SX_OB_20220404_16_19_S_S_Duplicate_EUF	Apr 04, 2022		Soil	M22-Ap0007207		X	X	X
6	SX_OB_20220404_17_05_S_R_Rinsate_EU_F	Apr 04, 2022		Water	M22-Ap0007208			X	
7	SX_OB_20220404_17_09_S	Apr 04, 2022		Water	M22-Ap0007209			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>									
	B_Blank_EUF								
8	SX_OB_20220404_20_05_S_S_Primary_EUF	Apr 04, 2022		Soil	M22-Ap0007210		X	X	X
9	SX_OB_20220405_04_06_S_S_Primary_EUF	Apr 05, 2022		Soil	M22-Ap0007211		X	X	X
10	SX_OB_20220404_08_18_S_S_Primary_EUF	Apr 04, 2022		AUS Leachate - pH 5.0	M22-Ap0007212	X		X	
11	SX_OB_20220	Apr 04, 2022		AUS Leachate	M22-	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>									
	404_08_35_S S_Triplicate_E UF			- pH 5.0	Ap0007213				
12	SX_OB_20220 404_12_06_S S_Primary_EU F	Apr 04, 2022		AUS Leachate - pH 5.0	M22- Ap0007214	X		X	
13	SX_OB_20220 404_16_17_S S_Primary_EU F	Apr 04, 2022		AUS Leachate - pH 5.0	M22- Ap0007215	X		X	
14	SX_OB_20220 404_16_19_S S_Duplicate_E	Apr 04, 2022		AUS Leachate - pH 5.0	M22- Ap0007216	X		X	

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**Project ID:** JC0927

**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>									
	UF								
15	SX_OB_20220404_20_05_S_S_Primary_EU_F	Apr 04, 2022		AUS Leachate - pH 5.0	M22-Ap0007219	X		X	
16	SX_OB_20220405_04_06_S_S_Primary_EU_F	Apr 05, 2022		AUS Leachate - pH 5.0	M22-Ap0007220	X		X	
17	SX_OB_20220404_08_18_S_S_Primary_EU_F	Apr 04, 2022		AUS Leachate - Reagent Water	M22-Ap0007221	X		X	
18	SX_OB_20220	Apr 04, 2022		AUS Leachate	M22-	X		X	



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<b>Project Name:</b>	WGTP-Tunnel Ref:20220405042859-Eurofin-14				
<b>Project ID:</b>	JC0927				

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFAS)	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>									
	404_08_35_S S_Triplicate_E UF			- Reagent Water	Ap0007222				
19	SX_OB_20220 404_12_06_S S_Primary_EU F	Apr 04, 2022		AUS Leachate - Reagent Water	M22- Ap0007223	X		X	
20	SX_OB_20220 404_16_17_S S_Primary_EU F	Apr 04, 2022		AUS Leachate - Reagent Water	M22- Ap0007224	X		X	
21	SX_OB_20220 404_16_19_S S_Duplicate_E	Apr 04, 2022		AUS Leachate - Reagent Water	M22- Ap0007225	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>									
	UF								
22	SX_OB_20220404_20_05_S_S_Primary_EU F	Apr 04, 2022		AUS Leachate - Reagent Water	M22-Ap0007228	X		X	
23	SX_OB_20220405_04_06_S_S_Primary_EU F	Apr 05, 2022		AUS Leachate - Reagent Water	M22-Ap0007229	X		X	
<b>Test Counts</b>						14	7	23	7

## 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)	%	94		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	92		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	98		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	93		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	93		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	87		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	96		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	101		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	112		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	100		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	108		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)	%	104			50-150	Pass		
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	107			50-150	Pass		
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	118			50-150	Pass		
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	91			50-150	Pass		
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	109			50-150	Pass		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	97			50-150	Pass		
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	86			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	101			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	108			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	106			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	103			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	107			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	96			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	96			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	97			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)	%	121			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	110			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	97			50-150	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCA)</b>								
Perfluorobutanoic acid (PFBA)	M22-Ma67305	NCP	%	112		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma67305	NCP	%	93		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma67305	NCP	%	103		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma67305	NCP	%	95		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma67305	NCP	%	101		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma67305	NCP	%	95		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma67305	NCP	%	104		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma67305	NCP	%	107		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma67305	NCP	%	119		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ma67305	NCP	%	183		50-150	Fail	Q08
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma67305	NCP	%	100		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>								
Perfluorooctane sulfonamide (FOSA)	M22-Ma67305	NCP	%	113		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma67305	NCP	%	106		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma67305	NCP	%	115		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma67305	NCP	%	104		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma67305	NCP	%	113		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma67305	NCP	%	92			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma67305	NCP	%	101			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M22-Ma67305	NCP	%	92			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ma67305	NCP	%	103			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma67305	NCP	%	102			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma67305	NCP	%	105			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma67305	NCP	%	104			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma67305	NCP	%	109			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ma67305	NCP	%	104			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ma67305	NCP	%	77			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-Ma67305	NCP	%	119			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma67305	NCP	%	138			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma67305	NCP	%	115			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma67305	NCP	%	100			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-Ma66031	NCP	ug/L	1.4	1.2	13	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma66031	NCP	ug/L	0.30	0.27	11	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma66031	NCP	ug/L	0.97	0.81	19	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma66031	NCP	ug/L	0.14	0.12	17	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma66031	NCP	ug/L	0.21	0.19	13	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma66031	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma66031	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma66031	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma66031	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTTrDA)	M22-Ma66031	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTEDA)	M22-Ma66031	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ma66031	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma66031	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma66031	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma66031	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma66031	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma66031	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma66031	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-Ma66031	NCP	ug/L	0.20	0.16	24	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma66031	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma66031	NCP	ug/L	0.13	0.06	67	30%	Fail Q15
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma66031	NCP	ug/L	0.05	0.04	5.0	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma66031	NCP	ug/L	0.25	0.20	22	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma66031	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma66031	NCP	ug/L	0.13	0.10	20	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma66031	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-Ma66031	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma66031	NCP	ug/L	3.1	3.0	2.0	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma66031	NCP	ug/L	0.02	0.02	17	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma66031	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).
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

**Authorised by:**

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



**Glenn Jackson**  
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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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 **877250-L**  
Project name **20220405042859-Eurofin-14**  
Project ID **JC0927**  
Received Date **Apr 05, 2022**

Client Sample ID			SX_OB_20220 404_08_18_SS _Primary_EUF	SX_OB_20220 404_08_35_SS _Triplicate_EU F	SX_OB_20220 404_12_06_SS _Primary_EUF	SX_OB_20220 404_16_17_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- Ap0007212	M22- Ap0007213	M22- Ap0007214	M22- Ap0007215
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 04, 2022	Apr 04, 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	4.9	4.9	4.9	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	%	97	89	92	93
13C5-PFPeA (surr.)	1	%	99	97	102	109
13C5-PFHxA (surr.)	1	%	95	93	85	90
13C4-PFHpA (surr.)	1	%	88	90	77	88
13C8-PFOA (surr.)	1	%	85	86	86	71
13C5-PFNA (surr.)	1	%	87	91	80	81
13C6-PFDA (surr.)	1	%	68	79	72	85
13C2-PFUnDA (surr.)	1	%	57	79	70	112
13C2-PFDoDA (surr.)	1	%	82	114	92	97
13C2-PFTTeDA (surr.)	1	%	57	101	68	74

Client Sample ID			SX_OB_20220 404_08_18_SS _Primary_EUF	SX_OB_20220 404_08_35_SS _Triplicate_EU F	SX_OB_20220 404_12_06_SS _Primary_EUF	SX_OB_20220 404_16_17_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- Ap0007212	M22- Ap0007213	M22- Ap0007214	M22- Ap0007215
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 04, 2022	Apr 04, 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	%	61	85	82	77
D3-N-MeFOSA (surr.)	1	%	83	99	85	108
D5-N-EtFOSA (surr.)	1	%	85	109	82	97
D7-N-MeFOSE (surr.)	1	%	65	95	92	113
D9-N-EtFOSE (surr.)	1	%	63	89	86	101
D5-N-EtFOSAA (surr.)	1	%	60	101	45	119
D3-N-MeFOSAA (surr.)	1	%	78	92	42	125
<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	0.04
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	87	81	88	94
18O2-PFHxS (surr.)	1	%	43	48	73	109
13C8-PFOS (surr.)	1	%	87	92	89	86
<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	%	75	76	82	114
13C2-6:2 FTSA (surr.)	1	%	146	133	109	89
13C2-8:2 FTSA (surr.)	1	%	79	82	78	115
13C2-10:2 FTSA (surr.)	1	%	82	117	62	63
<b>PFASs Summations</b>						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.04
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.04
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.04
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 404_16_19_SS Duplicate_EU F	SX_OB_20220 404_20_05_SS _Primary_EUF	SX_OB_20220 405_04_06_SS _Primary_EUF	SX_OB_20220 404_08_18_SS _Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0007216	M22- Ap0007219	M22- Ap0007220	M22- Ap0007221
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 05, 2022	Apr 04, 2022
Test/Reference	LOR	Unit				
<b>AUS Leaching Procedure</b>						
Leachate Fluid <sup>C01</sup>		comment	1.0	1.0	1.0	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	5.0	5.0	6.4
pH (off)	0.1	pH Units	4.9	4.9	4.9	8.4
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	87	88	92	74
13C5-PFPeA (surr.)	1	%	100	98	101	81
13C5-PFHxA (surr.)	1	%	81	81	76	63
13C4-PFHpA (surr.)	1	%	77	81	86	73
13C8-PFOA (surr.)	1	%	83	92	67	55
13C5-PFNA (surr.)	1	%	67	68	69	68
13C6-PFDA (surr.)	1	%	60	58	71	84
13C2-PFUnDA (surr.)	1	%	83	88	82	142
13C2-PFDoDA (surr.)	1	%	82	84	81	139
13C2-PFTeDA (surr.)	1	%	102	49	82	129
<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	%	63	63	64	76
D3-N-MeFOSA (surr.)	1	%	132	86	92	61
D5-N-EtFOSA (surr.)	1	%	134	73	97	61
D7-N-MeFOSE (surr.)	1	%	83	82	88	78
D9-N-EtFOSE (surr.)	1	%	77	78	82	74
D5-N-EtFOSAA (surr.)	1	%	77	39	26	65
D3-N-MeFOSAA (surr.)	1	%	32	69	87	112

Client Sample ID			SX_OB_20220 404_16_19_SS Duplicate_EU F	SX_OB_20220 404_20_05_SS Primary_EUF	SX_OB_20220 405_04_06_SS Primary_EUF	SX_OB_20220 404_08_18_SS Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0007216	M22- Ap0007219	M22- Ap0007220	M22- Ap0007221
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 05, 2022	Apr 04, 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	%	92	87	48	34
18O2-PFHxS (surr.)	1	%	103	104	108	103
13C8-PFOS (surr.)	1	%	71	70	71	85
<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	%	83	100	97	71
13C2-6:2 FTSA (surr.)	1	%	67	72	78	60
13C2-8:2 FTSA (surr.)	1	%	80	93	85	99
13C2-10:2 FTSA (surr.)	1	%	35	38	21	55
<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 404_08_35_SS TriPLICATE_EU F	SX_OB_20220 404_12_06_SS Primary_EUF	SX_OB_20220 404_16_17_SS Primary_EUF	SX_OB_20220 404_16_19_SS Duplicate_EU F
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0007222	M22- Ap0007223	M22- Ap0007224	M22- Ap0007225
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 04, 2022	Apr 04, 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	6.4	6.4	6.4	6.4
pH (off)	0.1	pH Units	9.0	8.7	8.6	8.7

Client Sample ID			SX_OB_20220 404_08_35_SS TriPLICATE_EU F	SX_OB_20220 404_12_06_SS Primary_EUF	SX_OB_20220 404_16_17_SS Primary_EUF	SX_OB_20220 404_16_19_SS Duplicate_EU F
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0007222	M22- Ap0007223	M22- Ap0007224	M22- Ap0007225
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 04, 2022	Apr 04, 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	%	78	48	91	89
13C5-PFPeA (surr.)	1	%	90	56	93	97
13C5-PFHxA (surr.)	1	%	72	61	87	81
13C4-PFHpA (surr.)	1	%	78	61	88	81
13C8-PFOA (surr.)	1	%	54	76	73	76
13C5-PFNA (surr.)	1	%	71	62	88	78
13C6-PFDA (surr.)	1	%	78	67	88	97
13C2-PFUnDA (surr.)	1	%	137	120	135	141
13C2-PFDoDA (surr.)	1	%	118	124	139	126
13C2-PFTeDA (surr.)	1	%	136	128	132	104
<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	%	78	54	81	80
D3-N-MeFOSA (surr.)	1	%	140	69	133	133
D5-N-EtFOSA (surr.)	1	%	112	61	116	112
D7-N-MeFOSE (surr.)	1	%	82	57	89	85
D9-N-EtFOSE (surr.)	1	%	78	60	81	79
D5-N-EtFOSAA (surr.)	1	%	95	133	98	128
D3-N-MeFOSAA (surr.)	1	%	127	128	116	143
<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 404_08_35_SS _TriPLICATE_EU F	SX_OB_20220 404_12_06_SS _Primary_EUF	SX_OB_20220 404_16_17_SS _Primary_EUF	SX_OB_20220 404_16_19_SS _Duplicate_EU F
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0007222	M22- Ap0007223	M22- Ap0007224	M22- Ap0007225
Date Sampled			Apr 04, 2022	Apr 04, 2022	Apr 04, 2022	Apr 04, 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
Perfluorodecane sulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	38	89	90	89
18O2-PFHxS (surr.)	1	%	105	87	104	100
13C8-PFOS (surr.)	1	%	88	68	91	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-perfluorodecane sulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecane sulfonic 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	%	83	110	137	117
13C2-6:2 FTSA (surr.)	1	%	66	48	84	80
13C2-8:2 FTSA (surr.)	1	%	128	100	137	132
13C2-10:2 FTSA (surr.)	1	%	52	46	70	66
<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 404_20_05_SS _Primary_EUF	SX_OB_20220 405_04_06_SS _Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0007228	M22- Ap0007229
Date Sampled			Apr 04, 2022	Apr 05, 2022
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	6.4	6.4
pH (off)	0.1	pH Units	8.9	5.1
<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

Client Sample ID			SX_OB_20220 404_20_05_SS _Primary_EUF	SX_OB_20220 405_04_06_SS _Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0007228	M22- Ap0007229
Date Sampled			Apr 04, 2022	Apr 05, 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
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 (PFTTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	88	78
13C5-PFPeA (surr.)	1	%	103	93
13C5-PFHxA (surr.)	1	%	87	76
13C4-PFHpA (surr.)	1	%	86	85
13C8-PFOA (surr.)	1	%	104	55
13C5-PFNA (surr.)	1	%	87	82
13C6-PFDA (surr.)	1	%	92	100
13C2-PFUnDA (surr.)	1	%	159	143
13C2-PFDoDA (surr.)	1	%	146	126
13C2-PFTTeDA (surr.)	1	%	185	96
<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	%	75	85
D3-N-MeFOSA (surr.)	1	%	135	148
D5-N-EtFOSA (surr.)	1	%	138	119
D7-N-MeFOSE (surr.)	1	%	90	98
D9-N-EtFOSE (surr.)	1	%	85	89
D5-N-EtFOSAA (surr.)	1	%	90	132
D3-N-MeFOSAA (surr.)	1	%	147	133
<b>Perfluoroalkyl sulfonic acids (PFSAs)</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	%	98	52
18O2-PFHxS (surr.)	1	%	108	115
13C8-PFOS (surr.)	1	%	93	92

<b>Client Sample ID</b>			<b>SX_OB_20220 404_20_05_SS _Primary_EUF</b>	<b>SX_OB_20220 405_04_06_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- Ap0007228</b>	<b>M22- Ap0007229</b>
<b>Date Sampled</b>			<b>Apr 04, 2022</b>	<b>Apr 05, 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	%	110	94
13C2-6:2 FTSA (surr.)	1	%	73	76
13C2-8:2 FTSA (surr.)	1	%	140	120
13C2-10:2 FTSA (surr.)	1	%	78	69
<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	Apr 06, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Apr 06, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Apr 06, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 06, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 06, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 06, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 06, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 05, 2022	

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<b>Project Name:</b>	WGTP-Tunnel Ref:20220405042859-Eurofin-14	<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_20220404_08_18_S_S_Primary_EU F	Apr 04, 2022		Soil	M22-Ap0007203		X	X	X
2	SX_OB_20220404_08_35_S_S_Triplicate_EU F	Apr 04, 2022		Soil	M22-Ap0007204		X	X	X
3	SX_OB_20220404_12_06_S_S_Primary_EU F	Apr 04, 2022		Soil	M22-Ap0007205		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_20220404_16_17_S_S_Primary_EU_F	Apr 04, 2022		Soil	M22-Ap0007206		X	X	X
5	SX_OB_20220404_16_19_S_S_Duplicate_EUF	Apr 04, 2022		Soil	M22-Ap0007207		X	X	X
6	SX_OB_20220404_17_05_S_R_Rinsate_EU_F	Apr 04, 2022		Water	M22-Ap0007208			X	
7	SX_OB_20220404_17_09_S	Apr 04, 2022		Water	M22-Ap0007209			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>									
	B_Blank_EUF								
8	SX_OB_20220404_20_05_S_S_Primary_EUF	Apr 04, 2022		Soil	M22-Ap0007210		X	X	X
9	SX_OB_20220405_04_06_S_S_Primary_EUF	Apr 05, 2022		Soil	M22-Ap0007211		X	X	X
10	SX_OB_20220404_08_18_S_S_Primary_EUF	Apr 04, 2022		AUS Leachate - pH 5.0	M22-Ap0007212	X		X	
11	SX_OB_20220404_08_18_S_S_Primary_EUF	Apr 04, 2022		AUS Leachate	M22-	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>									
	404_08_35_S S_Triplicate_E UF			- pH 5.0	Ap0007213				
12	SX_OB_20220 404_12_06_S S_Primary_EU F	Apr 04, 2022		AUS Leachate - pH 5.0	M22- Ap0007214	X		X	
13	SX_OB_20220 404_16_17_S S_Primary_EU F	Apr 04, 2022		AUS Leachate - pH 5.0	M22- Ap0007215	X		X	
14	SX_OB_20220 404_16_19_S S_Duplicate_E	Apr 04, 2022		AUS Leachate - pH 5.0	M22- Ap0007216	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>									
	UF								
15	SX_OB_20220404_20_05_S_S_Primary_EU_F	Apr 04, 2022		AUS Leachate - pH 5.0	M22-Ap0007219	X		X	
16	SX_OB_20220405_04_06_S_S_Primary_EU_F	Apr 05, 2022		AUS Leachate - pH 5.0	M22-Ap0007220	X		X	
17	SX_OB_20220404_08_18_S_S_Primary_EU_F	Apr 04, 2022		AUS Leachate - Reagent Water	M22-Ap0007221	X		X	
18	SX_OB_20220	Apr 04, 2022		AUS Leachate	M22-	X		X	

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<b>Project Name:</b>	WGTP-Tunnel Ref:20220405042859-Eurofin-14				
<b>Project ID:</b>	JC0927				

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>									
	404_08_35_S S_Triplicate_E UF			- Reagent Water	Ap0007222				
19	SX_OB_20220 404_12_06_S S_Primary_EU F	Apr 04, 2022		AUS Leachate - Reagent Water	M22- Ap0007223	X		X	
20	SX_OB_20220 404_16_17_S S_Primary_EU F	Apr 04, 2022		AUS Leachate - Reagent Water	M22- Ap0007224	X		X	
21	SX_OB_20220 404_16_19_S S_Duplicate_E	Apr 04, 2022		AUS Leachate - Reagent Water	M22- Ap0007225	X		X	

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<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>									
	UF								
22	SX_OB_20220404_20_05_S_S_Primary_EU F	Apr 04, 2022		AUS Leachate - Reagent Water	M22-Ap0007228	X		X	
23	SX_OB_20220405_04_06_S_S_Primary_EU F	Apr 05, 2022		AUS Leachate - Reagent Water	M22-Ap0007229	X		X	
<b>Test Counts</b>						14	7	23	7



**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)	%	105		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	110		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	96		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	100		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	99		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	109		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	90		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	114		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	101		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	100		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	119		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)	%	100			50-150	Pass			
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	131			50-150	Pass			
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	120			50-150	Pass			
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	95			50-150	Pass			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	98			50-150	Pass			
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	74			50-150	Pass			
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	125			50-150	Pass			
<b>LCS - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>									
Perfluorobutanesulfonic acid (PFBS)	%	91			50-150	Pass			
Perfluorononanesulfonic acid (PFNS)	%	101			50-150	Pass			
Perfluoropropanesulfonic acid (PFPrS)	%	115			50-150	Pass			
Perfluoropentanesulfonic acid (PFPeS)	%	105			50-150	Pass			
Perfluorohexanesulfonic acid (PFHxS)	%	92			50-150	Pass			
Perfluoroheptanesulfonic acid (PFHpS)	%	116			50-150	Pass			
Perfluorooctanesulfonic acid (PFOS)	%	118			50-150	Pass			
Perfluorodecanesulfonic acid (PFDS)	%	91			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)	%	112			50-150	Pass			
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	120			50-150	Pass			
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	104			50-150	Pass			
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	85			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-Ap0007223	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0007223	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-Ap0007223	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0007223	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0007223	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0007223	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0007223	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ap0007223	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0007223	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA's)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0007223	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0007223	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass

**Comments**
**Sample Integrity**

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

**Qualifier Codes/Comments**

Code	Description
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).

**Authorised by:**

Michael Cassidy	Analytical Services Manager
Joseph Edouard	Senior Analyst (VIC)
Mary Makarios	Senior Analyst (NSW)



**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)	Emma.S - EP Risk LR - EP Risk	
Address	Unit H76, 63-85 Turner St, Port Melbourne VIC 3207	Project Name	WGTP-Tunnel Ref:20220406043221-Eurofin-21	EDD Format ESdat, EQuIS etc	Esdat	Handed over by		
Contact Name	Craig Trimbur David Lawson	Analyses Where metals are requested, please specify 'Total' or 'Filtered' SUITE code must be used to attract SUITE pricing Spoil Sample Preparation Suite WGTP-R1-TRH/PAH/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					Email for Invoice	finance@agonenviro.com.au LabReports.TST@agonenviro.com.au
Phone No	+61 400 826 907 (Craig) +61 490 411 004 (David)						Email for Results	LabReports.TST@agonenviro.com.au agonenvironmental@esdat.com.au motherhublabresults1@wgtp.com.au Amrit.Kaur@agile-analytics.com.au
Special Directions	Please provide an interim lab report if finalised report has not been provided by 14 days from sample receipt. Please provide eSRN along with oter sample receipt documentation.						Containers Change container type & size if necessary 500mL Plastic 250mL Plastic 125mL Plastic 200mL Amber Glass 40mL VOA vial 500mL PFAS Bottle Jar (Glass or HDPE) Other (Asbestos AS4884, WA Guidelines)	
Purchase Order							Required Turnaround Time (TAT) Default will be 5 days if not ticked *Surcharge will apply <input type="checkbox"/> Overnight (reporting by 9am)* <input type="checkbox"/> Same day <input type="checkbox"/> 1 day <input type="checkbox"/> <input type="checkbox"/> 2 days <input type="checkbox"/> 3 days <input type="checkbox"/> <input checked="" type="checkbox"/> 5 days (Standard) <input type="checkbox"/> Other( )	
Quote ID No	Agon WGTP TST							

No	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)																		Sample Comments / Dangerous Goods Hazard Warning
1	SX_OB_20220405_08_16_SS_Primary_EUF	5/04/22	S	X	X	X	X	X													1
2	SX_OB_20220405_08_25_SS_Triplicate_EUF	5/04/22	S	X	X	X	X	X													1
3	SX_OB_20220405_12_30_SS_Primary_EUF	5/04/22	S	X	X	X	X	X													1
4	SX_OB_20220405_16_10_SS_Primary_EUF	5/04/22	S	X	X	X	X	X													1
5	SX_OB_20220405_16_12_SS_Duplicate_EUF	5/04/22	S	X	X	X	X	X													1
6	SX_OB_20220405_16_27_SR_Rinsate_EUF	5/04/22	W			X															1
7	SX_OB_20220405_16_28_SB_Blank_EUF	5/04/22	W			X															1
8	SX_OB_20220405_19_57_SS_Primary_EUF	5/04/22	S	X	X	X	X	X													1
9	SX_OB_20220406_00_13_SS_Primary_EUF	6/04/22	S	X	X	X	X	X													1
10	SX_OB_20220406_04_05_SS_Primary_EUF	6/04/22	S	X	X	X	X	X													
11																					
12																					
13																					
Total Counts				5	5	10	5	5													9

Method of Shipment	<input checked="" type="checkbox"/> Courier <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Postal	Name	Signature	Date	Time
Received By	SYD   BNE   MEL   PER   ADL   NTL   DRW	Signature	Date	Time	Temperature
Received By	SYD   BNE   MEL   PER   ADL   NTL   DRW	Signature	Date	Time	Report No

Checked:   
 Temp: 18.2  
 Corrected Final Temp: 18.0  
 Jake

## Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

**Melbourne**

6 Monterey Road  
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Phone : +61 3 8564 5000  
NATA # 1261 Site # 1254

**Sydney**

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NATA # 1261 Site # 18217

**Brisbane**

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**Newcastle**

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## Eurofins ARL Pty Ltd

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**Perth**

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IANZ # 1327

**Christchurch**

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Rolleston, Christchurch 7675  
Phone : 0800 856 450  
IANZ # 1290

## Sample Receipt Advice

**Company name:** Agon Environmental Pty Ltd - VIC  
**Contact name:** Agon Lab Reports (Spoil Project)  
**Project name:** 20220406043221-Eurofin-21  
**Project ID:** JC0927  
**Turnaround time:** 5 Day  
**Date/Time received:** Apr 6, 2022 11:59 AM  
**Eurofins reference:** 877551

## Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✗ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

## Notes

## Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

**Michael Cassidy on phone : +61 3 8564 5000 or by email: MichaelCassidy@eurofins.com**

Results will be delivered electronically via email to Agon Lab Reports (Spoil Project) - labreports.TST@agonenviro.com.au.

*Note: A copy of these results will also be delivered to the general Agon Environmental Pty Ltd - VIC email address.*



Environment Testing

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email: EnviroSales@eurofins.com

**Company Name:** Agon Environmental Pty Ltd - VIC  
**Address:** 3/224 Glen Osmond Road  
Fullarton  
SA 5063  
  
**Project Name:** 20220406043221-Eurofin-21  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 877551  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Apr 6, 2022 11:59 AM  
**Due:** Apr 13, 2022  
**Priority:** 5 Day  
**Contact Name:** Agon Lab Reports (Spoil Project)

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_OB_20220405_08_16_S_S_Primary_EU_F	Apr 05, 2022	8:16AM	Soil	M22-Ap0010606		X	X	X
2	SX_OB_20220405_08_25_S_S_Triplicate_EUF	Apr 05, 2022	8:25AM	Soil	M22-Ap0010607		X	X	X
3	SX_OB_20220405_12_30_S_S_Primary_EU_F	Apr 05, 2022	12:30PM	Soil	M22-Ap0010608		X	X	X



<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 6, 2022 11:59 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	877551	<b>Due:</b>	Apr 13, 2022
<b>Project Name:</b>	20220406043221-Eurofin-21	<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>									
4	SX_OB_20220405_16_10_S_S_Primary_EU_F	Apr 05, 2022	4:10PM	Soil	M22-Ap0010609		X	X	X
5	SX_OB_20220405_16_12_S_S_Duplicate_EU_F	Apr 05, 2022	4:12PM	Soil	M22-Ap0010610		X	X	X
6	SX_OB_20220405_16_27_S_R_Rinsate_EU_F	Apr 05, 2022	4:27PM	Water	M22-Ap0010611			X	
7	SX_OB_20220405_16_28_S	Apr 05, 2022	4:28PM	Water	M22-Ap0010612			X	



# Environment Testing

## Eurofins Environment Testing Australia Pty Ltd

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web: www.eurofins.com.au  
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**Company Name:** Agon Environmental Pty Ltd - VIC  
**Address:** 3/224 Glen Osmond Road  
Fullarton  
SA 5063  
  
**Project Name:** 20220406043221-Eurofin-21  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 877551  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Apr 6, 2022 11:59 AM  
**Due:** Apr 13, 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>									
	B_Blank_EUF								
8	SX_OB_20220405_19_57_S_S_Primary_EUF	Apr 05, 2022	7:57PM	Soil	M22-Ap0010613		X	X	X
9	SX_OB_20220406_00_13_S_S_Primary_EUF	Apr 06, 2022	12:13AM	Soil	M22-Ap0010614		X	X	X
10	SX_OB_20220406_04_05_S_S_Primary_EUF	Apr 06, 2022	4:05AM	Soil	M22-Ap0010615		X	X	X
11	SX_OB_20220	Apr 05, 2022	8:16AM	AUS Leachate	M22-	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 6, 2022 11:59 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	877551	<b>Due:</b>	Apr 13, 2022
<b>Project Name:</b>	20220406043221-Eurofin-21	<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>									
	405_08_16_S S_Primary_EU F			- pH 5.0	Ap0010616				
12	SX_OB_20220 405_08_25_S S_Triplicate_E UF	Apr 05, 2022	8:25AM	AUS Leachate - pH 5.0	M22- Ap0010617	X		X	
13	SX_OB_20220 405_12_30_S S_Primary_EU F	Apr 05, 2022	12:30PM	AUS Leachate - pH 5.0	M22- Ap0010618	X		X	
14	SX_OB_20220 405_16_10_S S_Primary_EU	Apr 05, 2022	4:10PM	AUS Leachate - pH 5.0	M22- Ap0010619	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  
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Phone : +61 8 6253 4444  
NATA # 2377 Site # 2370

## Eurofins Environment Testing NZ Limited

NZBN: 9429046024954

**Auckland**  
35 O'Rorke Road  
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<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 6, 2022 11:59 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	877551	<b>Due:</b>	Apr 13, 2022
<b>Project Name:</b>	20220406043221-Eurofin-21	<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>									
	F								
15	SX_OB_20220405_16_12_S_S_Duplicate_EUF	Apr 05, 2022	4:12PM	AUS Leachate - pH 5.0	M22-Ap0010620	X		X	
16	SX_OB_20220405_19_57_S_S_Primary_EUF	Apr 05, 2022	7:57PM	AUS Leachate - pH 5.0	M22-Ap0010621	X		X	
17	SX_OB_20220406_00_13_S_S_Primary_EUF	Apr 06, 2022	12:13AM	AUS Leachate - pH 5.0	M22-Ap0010622	X		X	
18	SX_OB_20220	Apr 06, 2022	4:05AM	AUS Leachate	M22-	X		X	

**Company Name:** Agon Environmental Pty Ltd - VIC  
**Address:** 3/224 Glen Osmond Road  
Fullarton  
SA 5063  
  
**Project Name:** 20220406043221-Eurofin-21  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 877551  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Apr 6, 2022 11:59 AM  
**Due:** Apr 13, 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>									
	406_04_05_S S_Primary_EU F			- pH 5.0	Ap0010623				
19	SX_OB_20220 405_08_16_S S_Primary_EU F	Apr 05, 2022	8:16AM	AUS Leachate - Reagent Water	M22- Ap0010624	X		X	
20	SX_OB_20220 405_08_25_S S_Triplicate_E UF	Apr 05, 2022	8:25AM	AUS Leachate - Reagent Water	M22- Ap0010625	X		X	
21	SX_OB_20220 405_12_30_S S_Primary_EU	Apr 05, 2022	12:30PM	AUS Leachate - Reagent Water	M22- Ap0010626	X		X	



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NATA # 1261 Site # 20794

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PO Box 60 Wickham 2293  
Phone : +61 2 4968 8448  
NATA # 1261 Site # 25079

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## Eurofins Environment Testing NZ Limited

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**Company Name:** Agon Environmental Pty Ltd - VIC  
**Address:** 3/224 Glen Osmond Road  
Fullarton  
SA 5063  
  
**Project Name:** 20220406043221-Eurofin-21  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 877551  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Apr 6, 2022 11:59 AM  
**Due:** Apr 13, 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>									
	F								
22	SX_OB_20220405_16_10_S_S_Primary_EU_F	Apr 05, 2022	4:10PM	AUS Leachate - Reagent Water	M22-Ap0010627	X		X	
23	SX_OB_20220405_16_12_S_S_Duplicate_EUF	Apr 05, 2022	4:12PM	AUS Leachate - Reagent Water	M22-Ap0010628	X		X	
24	SX_OB_20220405_19_57_S_S_Primary_EU_F	Apr 05, 2022	7:57PM	AUS Leachate - Reagent Water	M22-Ap0010629	X		X	
25	SX_OB_20220	Apr 06, 2022	12:13AM	AUS Leachate	M22-	X		X	



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NATA # 1261 Site # 20794

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## Eurofins Environment Testing NZ Limited

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**Christchurch**  
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Rolleston, Christchurch 7675  
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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:** 20220406043221-Eurofin-21  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 877551  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Apr 6, 2022 11:59 AM  
**Due:** Apr 13, 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>									
	406_00_13_S S_Primary_EU F			- Reagent Water	Ap0010630				
26	SX_OB_20220 406_04_05_S S_Primary_EU F	Apr 06, 2022	4:05AM	AUS Leachate - Reagent Water	M22- Ap0010631	X		X	
<b>Test Counts</b>						16	8	26	8

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: **Agon Lab Reports (Spoil Project)**

Report **877551-S**  
Project name **20220406043221-Eurofin-21**  
Project ID **JC0927**  
Received Date **Apr 06, 2022**

Client Sample ID			SX_OB_20220 405_08_16_SS _Primary_EUF	SX_OB_20220 405_08_25_SS _Triplicate_EU F	SX_OB_20220 405_12_30_SS _Primary_EUF	SX_OB_20220 405_16_10_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0010606	M22- Ap0010607	M22- Ap0010608	M22- Ap0010609
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 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	32	50	< 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	51	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	51	< 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 405_08_16_SS _Primary_EUF	SX_OB_20220 405_08_25_SS _Triplicate_EU F	SX_OB_20220 405_12_30_SS _Primary_EUF	SX_OB_20220 405_16_10_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0010606	M22- Ap0010607	M22- Ap0010608	M22- Ap0010609
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 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	%	87	74	92	92
Toluene-d8 (surr.)	1	%	91	78	97	97
<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 405_08_16_SS _Primary_EUF	SX_OB_20220 405_08_25_SS _Triplicate_EU F	SX_OB_20220 405_12_30_SS _Primary_EUF	SX_OB_20220 405_16_10_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0010606	M22- Ap0010607	M22- Ap0010608	M22- Ap0010609
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 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	%	56	57	68	72
p-Terphenyl-d14 (surr.)	1	%	78	77	83	92
<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	%	147	96	97	113
Tetrachloro-m-xylene (surr.)	1	%	79	66	83	97

Client Sample ID			SX_OB_20220 405_08_16_SS _Primary_EUF	SX_OB_20220 405_08_25_SS _Triplicate_EU F	SX_OB_20220 405_12_30_SS _Primary_EUF	SX_OB_20220 405_16_10_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0010606	M22- Ap0010607	M22- Ap0010608	M22- Ap0010609
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 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	%	147	96	97	113
Tetrachloro-m-xylene (surr.)	1	%	79	66	83	97
<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	%	80	106	104	85
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	340	< 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	8.4	8.5	8.4	8.5
<b>% Moisture</b>						
% Moisture	1	%	24	29	26	32
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	30	33	32	60
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	200	140	140	200
Copper	5	mg/kg	94	78	70	84
Lead	5	mg/kg	< 5	< 5	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_OB_20220 405_08_16_SS _Primary_EUF	SX_OB_20220 405_08_25_SS _Triplicate_EU F	SX_OB_20220 405_12_30_SS _Primary_EUF	SX_OB_20220 405_16_10_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0010606	M22- Ap0010607	M22- Ap0010608	M22- Ap0010609
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	300	230	220	250
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	180	130	130	150
<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	106	104	92
13C5-PFPeA (surr.)	1	%	96	71	101	91
13C5-PFHxA (surr.)	1	%	83	100	96	81
13C4-PFHpA (surr.)	1	%	81	91	84	77
13C8-PFOA (surr.)	1	%	73	92	104	80
13C5-PFNA (surr.)	1	%	63	82	94	67
13C6-PFDA (surr.)	1	%	78	89	99	92
13C2-PFUnDA (surr.)	1	%	124	115	96	98
13C2-PFDoDA (surr.)	1	%	62	71	63	86
13C2-PFTeDA (surr.)	1	%	80	70	76	91
<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	%	91	50	172	93
D3-N-MeFOSA (surr.)	1	%	82	108	105	80
D5-N-EtFOSA (surr.)	1	%	89	123	127	89
D7-N-MeFOSE (surr.)	1	%	96	75	75	82
D9-N-EtFOSE (surr.)	1	%	79	87	89	85
D5-N-EtFOSAA (surr.)	1	%	104	138	26	86
D3-N-MeFOSAA (surr.)	1	%	119	98	89	89

Client Sample ID			SX_OB_20220 405_08_16_SS _Primary_EUF	SX_OB_20220 405_08_25_SS _TriPLICATE_EU F	SX_OB_20220 405_12_30_SS _Primary_EUF	SX_OB_20220 405_16_10_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0010606	M22- Ap0010607	M22- Ap0010608	M22- Ap0010609
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 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	%	73	88	89	71
18O2-PFHxS (surr.)	1	%	82	98	108	93
13C8-PFOS (surr.)	1	%	84	69	88	78
<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	%	61	71	85	58
13C2-6:2 FTSA (surr.)	1	%	64	77	55	65
13C2-8:2 FTSA (surr.)	1	%	96	92	120	102
13C2-10:2 FTSA (surr.)	1	%	62	152	135	107
<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 405_16_12_SS _Duplicate_EU F	SX_OB_20220 405_19_57_SS _Primary_EUF	SX_OB_20220 406_00_13_SS _Primary_EUF	SX_OB_20220 406_04_05_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0010610	M22- Ap0010613	M22- Ap0010614	M22- Ap0010615
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 06, 2022	Apr 06, 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 405_16_12_SS Duplicate_EU F	SX_OB_20220 405_19_57_SS Primary_EUF	SX_OB_20220 406_00_13_SS Primary_EUF	SX_OB_20220 406_04_05_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0010610	M22- Ap0010613	M22- Ap0010614	M22- Ap0010615
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 06, 2022	Apr 06, 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 405_16_12_SS Duplicate_EUF	SX_OB_20220 405_19_57_SS Primary_EUF	SX_OB_20220 406_00_13_SS Primary_EUF	SX_OB_20220 406_04_05_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0010610	M22- Ap0010613	M22- Ap0010614	M22- Ap0010615
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 06, 2022	Apr 06, 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	%	66	80	99	83
Toluene-d8 (surr.)	1	%	63	84	104	85
<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	%	61	69	56	123
p-Terphenyl-d14 (surr.)	1	%	78	74	75	107

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0010610	M22- Ap0010613	M22- Ap0010614	M22- Ap0010615
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 06, 2022	Apr 06, 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
Dibutylchloroendate (surr.)	1	%	102	104	131	88
Tetrachloro-m-xylene (surr.)	1	%	71	90	97	59
<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	%	102	104	131	88
Tetrachloro-m-xylene (surr.)	1	%	71	90	97	59
<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 405_16_12_SS Duplicate_EU F	SX_OB_20220 405_19_57_SS Primary_EUF	SX_OB_20220 406_00_13_SS Primary_EUF	SX_OB_20220 406_04_05_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0010610	M22- Ap0010613	M22- Ap0010614	M22- Ap0010615
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 06, 2022	Apr 06, 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	%	82	89	81	95
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	380	430	< 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	8.4	8.5	8.6	8.7
<b>% Moisture</b>						
% Moisture	1	%	28	32	34	28
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	67	44	48	19
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	220	170	190	140
Copper	5	mg/kg	90	91	82	75
Lead	5	mg/kg	< 5	6.2	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	270	280	250	250
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	160	160	150	140
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (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	%	101	90	90	94
13C5-PFPeA (surr.)	1	%	69	79	88	90
13C5-PFHxA (surr.)	1	%	93	75	81	81

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0010610	M22- Ap0010613	M22- Ap0010614	M22- Ap0010615
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 06, 2022	Apr 06, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
13C4-PFHpA (surr.)	1	%	85	73	76	84
13C8-PFOA (surr.)	1	%	96	83	73	84
13C5-PFNA (surr.)	1	%	77	79	70	66
13C6-PFDA (surr.)	1	%	90	76	75	70
13C2-PFUnDA (surr.)	1	%	93	110	113	99
13C2-PFDoDA (surr.)	1	%	66	69	78	72
13C2-PFTeDA (surr.)	1	%	81	84	92	82
<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	%	119	88	93	93
D3-N-MeFOSA (surr.)	1	%	103	80	84	81
D5-N-EtFOSA (surr.)	1	%	125	85	87	95
D7-N-MeFOSE (surr.)	1	%	105	77	83	89
D9-N-EtFOSE (surr.)	1	%	89	73	77	84
D5-N-EtFOSAA (surr.)	1	%	123	76	78	82
D3-N-MeFOSAA (surr.)	1	%	79	70	115	105
<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	%	69	69	69	79
18O2-PFHxS (surr.)	1	%	92	79	84	86
13C8-PFOS (surr.)	1	%	72	84	87	70
<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	%	68	68	63	62
13C2-6:2 FTSA (surr.)	1	%	76	57	50	66

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0010610	M22- Ap0010613	M22- Ap0010614	M22- Ap0010615
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 06, 2022	Apr 06, 2022
Test/Reference	LOR	Unit				
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
13C2-8:2 FTSA (surr.)	1	%	87	104	86	116
13C2-10:2 FTSA (surr.)	1	%	90	74	89	86
<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	Apr 07, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Apr 07, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Apr 07, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	Apr 07, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	Apr 07, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Apr 07, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	Apr 07, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	Apr 07, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Apr 07, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Apr 07, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	Apr 07, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	Apr 07, 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	Apr 07, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Apr 07, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	Apr 07, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Apr 06, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 07, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 07, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 07, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 07, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 06, 2022	

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<b>Project Name:</b>	20220406043221-Eurofin-21	<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>									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_OB_20220405_08_16_S_S_Primary_EU F	Apr 05, 2022	8:16AM	Soil	M22-Ap0010606		X	X	X
2	SX_OB_20220405_08_25_S_S_Triplicate_EU F	Apr 05, 2022	8:25AM	Soil	M22-Ap0010607		X	X	X
3	SX_OB_20220405_12_30_S_S_Primary_EU F	Apr 05, 2022	12:30PM	Soil	M22-Ap0010608		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_20220405_16_10_S_S_Primary_EU_F	Apr 05, 2022	4:10PM	Soil	M22-Ap0010609		X	X	X
5	SX_OB_20220405_16_12_S_S_Duplicate_EU_F	Apr 05, 2022	4:12PM	Soil	M22-Ap0010610		X	X	X
6	SX_OB_20220405_16_27_S_R_Rinsate_EU_F	Apr 05, 2022	4:27PM	Water	M22-Ap0010611			X	
7	SX_OB_20220405_16_28_S	Apr 05, 2022	4:28PM	Water	M22-Ap0010612			X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	B_Blank_EUF								
8	SX_OB_20220405_19_57_S_S_Primary_EUF	Apr 05, 2022	7:57PM	Soil	M22-Ap0010613		X	X	X
9	SX_OB_20220406_00_13_S_S_Primary_EUF	Apr 06, 2022	12:13AM	Soil	M22-Ap0010614		X	X	X
10	SX_OB_20220406_04_05_S_S_Primary_EUF	Apr 06, 2022	4:05AM	Soil	M22-Ap0010615		X	X	X
11	SX_OB_20220	Apr 05, 2022	8:16AM	AUS Leachate	M22-	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>									
	405_08_16_S S_Primary_EU F			- pH 5.0	Ap0010616				
12	SX_OB_20220 405_08_25_S S_Triplicate_E UF	Apr 05, 2022	8:25AM	AUS Leachate - pH 5.0	M22- Ap0010617	X		X	
13	SX_OB_20220 405_12_30_S S_Primary_EU F	Apr 05, 2022	12:30PM	AUS Leachate - pH 5.0	M22- Ap0010618	X		X	
14	SX_OB_20220 405_16_10_S S_Primary_EU	Apr 05, 2022	4:10PM	AUS Leachate - pH 5.0	M22- Ap0010619	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>									
	F								
15	SX_OB_20220405_16_12_S_S_Duplicate_EUF	Apr 05, 2022	4:12PM	AUS Leachate - pH 5.0	M22-Ap0010620	X		X	
16	SX_OB_20220405_19_57_S_S_Primary_EUF	Apr 05, 2022	7:57PM	AUS Leachate - pH 5.0	M22-Ap0010621	X		X	
17	SX_OB_20220406_00_13_S_S_Primary_EUF	Apr 06, 2022	12:13AM	AUS Leachate - pH 5.0	M22-Ap0010622	X		X	
18	SX_OB_20220	Apr 06, 2022	4:05AM	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>									
	406_04_05_S S_Primary_EU F			- pH 5.0	Ap0010623				
19	SX_OB_20220 405_08_16_S S_Primary_EU F	Apr 05, 2022	8:16AM	AUS Leachate - Reagent Water	M22- Ap0010624	X		X	
20	SX_OB_20220 405_08_25_S S_Triplicate_E UF	Apr 05, 2022	8:25AM	AUS Leachate - Reagent Water	M22- Ap0010625	X		X	
21	SX_OB_20220 405_12_30_S S_Primary_EU	Apr 05, 2022	12:30PM	AUS Leachate - Reagent Water	M22- Ap0010626	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>									
	F								
22	SX_OB_20220405_16_10_S_S_Primary_EU_F	Apr 05, 2022	4:10PM	AUS Leachate - Reagent Water	M22-Ap0010627	X		X	
23	SX_OB_20220405_16_12_S_S_Duplicate_EUF	Apr 05, 2022	4:12PM	AUS Leachate - Reagent Water	M22-Ap0010628	X		X	
24	SX_OB_20220405_19_57_S_S_Primary_EU_F	Apr 05, 2022	7:57PM	AUS Leachate - Reagent Water	M22-Ap0010629	X		X	
25	SX_OB_20220	Apr 06, 2022	12:13AM	AUS Leachate	M22-	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>									
	406_00_13_S S_Primary_EU F			- Reagent Water	Ap0010630				
26	SX_OB_20220 406_04_05_S S_Primary_EU F	Apr 06, 2022	4:05AM	AUS Leachate - Reagent Water	M22- Ap0010631	X		X	
<b>Test Counts</b>						16	8	26	8

## Internal Quality Control Review and Glossary

### General

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

### Holding Times

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

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

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

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

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

### Units

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

### Terms

<b>APHA</b>	American Public Health Association
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
<b>NCP</b>	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>TBTO</b>	Tributyltin oxide ( <i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 5.4
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

### QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

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

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

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

### QC Data General Comments

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

**Quality Control Results**

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons</b>							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
<b>Method Blank</b>							
<b>Volatile Organics</b>							
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Volatile Organics</b>							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Benzene	mg/kg	< 0.1			0.1	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	

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

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



Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Zinc	mg/kg	< 5		5	Pass	
<b>Method Blank</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA)	ug/kg	< 5		5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5		5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5		5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5		5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5		5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5		5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5		5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5		5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5		5	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 5		5	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 5		5	Pass	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5		5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5		5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5		5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/kg	< 5		5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/kg	< 5		5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10		10	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 10		10	Pass	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>						
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5		5	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 5		5	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 5		5	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 5		5	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5		5	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 5		5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5		5	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 5		5	Pass	
<b>Method Blank</b>						
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5		5	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/kg	< 10		10	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5		5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5		5	Pass	
<b>LCS - % Recovery</b>						
<b>Total Recoverable Hydrocarbons</b>						
TRH C6-C9	%	92		70-130	Pass	
TRH C10-C14	%	120		70-130	Pass	
Naphthalene	%	87		70-130	Pass	
TRH C6-C10	%	92		70-130	Pass	
TRH >C10-C16	%	124		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Volatile Organics</b>						
1.1-Dichloroethene	%	86		70-130	Pass	
1.1.1-Trichloroethane	%	88		70-130	Pass	
1.2-Dichlorobenzene	%	103		70-130	Pass	
1.2-Dichloroethane	%	118		70-130	Pass	
Benzene	%	111		70-130	Pass	
Ethylbenzene	%	109		70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	106			70-130	Pass	
Toluene	%	109			70-130	Pass	
Trichloroethene	%	111			70-130	Pass	
Xylenes - Total*	%	106			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	%	102			70-130	Pass	
Acenaphthylene	%	99			70-130	Pass	
Anthracene	%	90			70-130	Pass	
Benz(a)anthracene	%	86			70-130	Pass	
Benzo(a)pyrene	%	92			70-130	Pass	
Benzo(b&i)fluoranthene	%	109			70-130	Pass	
Benzo(g,h,i)perylene	%	123			70-130	Pass	
Benzo(k)fluoranthene	%	108			70-130	Pass	
Chrysene	%	116			70-130	Pass	
Dibenz(a,h)anthracene	%	82			70-130	Pass	
Fluoranthene	%	95			70-130	Pass	
Fluorene	%	91			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	76			70-130	Pass	
Naphthalene	%	92			70-130	Pass	
Phenanthrene	%	79			70-130	Pass	
Pyrene	%	102			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Organochlorine Pesticides</b>							
Chlordanes - Total	%	77			70-130	Pass	
4,4'-DDD	%	123			70-130	Pass	
4,4'-DDE	%	96			70-130	Pass	
4,4'-DDT	%	97			70-130	Pass	
a-HCH	%	90			70-130	Pass	
Aldrin	%	75			70-130	Pass	
b-HCH	%	111			70-130	Pass	
d-HCH	%	111			70-130	Pass	
Dieldrin	%	79			70-130	Pass	
Endosulfan I	%	89			70-130	Pass	
Endosulfan II	%	73			70-130	Pass	
Endosulfan sulphate	%	84			70-130	Pass	
Endrin	%	89			70-130	Pass	
Endrin aldehyde	%	99			70-130	Pass	
Endrin ketone	%	93			70-130	Pass	
g-HCH (Lindane)	%	80			70-130	Pass	
Heptachlor	%	91			70-130	Pass	
Heptachlor epoxide	%	73			70-130	Pass	
Hexachlorobenzene	%	90			70-130	Pass	
Methoxychlor	%	119			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polychlorinated Biphenyls</b>							
Aroclor-1260	%	123			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Phenols (Halogenated)</b>							
2-Chlorophenol	%	110			25-140	Pass	
2,4-Dichlorophenol	%	97			25-140	Pass	
2,4,5-Trichlorophenol	%	88			25-140	Pass	
2,4,6-Trichlorophenol	%	94			25-140	Pass	
2,6-Dichlorophenol	%	86			25-140	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
4-Chloro-3-methylphenol	%	108		25-140	Pass	
Pentachlorophenol	%	80		25-140	Pass	
Tetrachlorophenols - Total	%	68		25-140	Pass	
<b>LCS - % Recovery</b>						
<b>Phenols (non-Halogenated)</b>						
2-Cyclohexyl-4,6-dinitrophenol	%	69		25-140	Pass	
2-Methyl-4,6-dinitrophenol	%	68		25-140	Pass	
2-Nitrophenol	%	98		25-140	Pass	
2,4-Dimethylphenol	%	92		25-140	Pass	
2,4-Dinitrophenol	%	48		25-140	Pass	
2-Methylphenol (o-Cresol)	%	92		25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	100		25-140	Pass	
4-Nitrophenol	%	80		25-140	Pass	
Dinoseb	%	75		25-140	Pass	
Phenol	%	118		25-140	Pass	
<b>LCS - % Recovery</b>						
Chromium (hexavalent)	%	89		70-130	Pass	
Cyanide (total)	%	96		70-130	Pass	
Fluoride (Total)	%	82		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Heavy Metals</b>						
Arsenic	%	120		80-120	Pass	
Cadmium	%	115		80-120	Pass	
Chromium	%	119		80-120	Pass	
Copper	%	117		80-120	Pass	
Lead	%	116		80-120	Pass	
Mercury	%	120		80-120	Pass	
Molybdenum	%	118		80-120	Pass	
Nickel	%	117		80-120	Pass	
Selenium	%	118		80-120	Pass	
Silver	%	115		80-120	Pass	
Tin	%	117		80-120	Pass	
Zinc	%	113		80-120	Pass	
<b>LCS - % Recovery</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA)	%	77		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	101		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	85		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	75		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	88		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	80		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	66		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	76		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	73		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	134		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	107		50-150	Pass	
<b>LCS - % Recovery</b>						
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA)	%	99		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	119		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	101		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	57		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	103		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	55		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	92			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	100			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	144			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	133			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	76			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	55			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	80			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	95			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	119			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)	%	130			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	89			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	93			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	M22-Ap0006126	NCP	%	84		70-130	Pass	
TRH C10-C14	M22-Ap0012211	NCP	%	109		70-130	Pass	
Naphthalene	M22-Ap0006126	NCP	%	83		70-130	Pass	
TRH C6-C10	M22-Ap0006126	NCP	%	84		70-130	Pass	
TRH >C10-C16	M22-Ap0012211	NCP	%	115		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Volatile Organics</b>				Result 1				
1.1-Dichloroethene	M22-Ap0006004	NCP	%	106		70-130	Pass	
1.1.1-Trichloroethane	M22-Ap0006004	NCP	%	116		70-130	Pass	
1.2-Dichlorobenzene	M22-Ap0006126	NCP	%	102		70-130	Pass	
1.2-Dichloroethane	M22-Ap0006126	NCP	%	124		70-130	Pass	
Benzene	M22-Ap0006126	NCP	%	97		70-130	Pass	
Ethylbenzene	M22-Ap0006126	NCP	%	81		70-130	Pass	
m&p-Xylenes	M22-Ap0006126	NCP	%	80		70-130	Pass	
o-Xylene	M22-Ap0006126	NCP	%	90		70-130	Pass	
Toluene	M22-Ap0006126	NCP	%	89		70-130	Pass	
Trichloroethene	M22-Ap0006126	NCP	%	99		70-130	Pass	
Xylenes - Total*	M22-Ap0006126	NCP	%	83		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1				
Acenaphthene	M22-Ap0002724	NCP	%	86		70-130	Pass	
Acenaphthylene	M22-Ap0002724	NCP	%	81		70-130	Pass	
Anthracene	M22-Ap0002724	NCP	%	73		70-130	Pass	
Benz(a)anthracene	M22-Ap0002724	NCP	%	76		70-130	Pass	
Benzo(a)pyrene	M22-Ap0002724	NCP	%	75		70-130	Pass	
Benzo(b&j)fluoranthene	M22-Ap0002724	NCP	%	91		70-130	Pass	
Benzo(g,h,i)perylene	M22-Ap0002724	NCP	%	93		70-130	Pass	
Benzo(k)fluoranthene	M22-Ap0002724	NCP	%	78		70-130	Pass	
Chrysene	M22-Ap0002724	NCP	%	102		70-130	Pass	
Dibenz(a,h)anthracene	M22-Ap0002724	NCP	%	92		70-130	Pass	
Fluoranthene	M22-Ap0002724	NCP	%	78		70-130	Pass	
Fluorene	M22-Ap0002724	NCP	%	72		70-130	Pass	
Indeno(1.2.3-cd)pyrene	M22-Ap0002724	NCP	%	106		70-130	Pass	
Naphthalene	M22-Ap0002724	NCP	%	74		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Phenanthrene	M22-Ap0002724	NCP	%	92		70-130	Pass	
Pyrene	M22-Ap0002724	NCP	%	86		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (Halogenated)</b>				Result 1				
2-Chlorophenol	M22-Ap0002724	NCP	%	84		30-130	Pass	
2,4-Dichlorophenol	M22-Ap0002724	NCP	%	80		30-130	Pass	
2,4,5-Trichlorophenol	M22-Ap0002724	NCP	%	76		30-130	Pass	
2,4,6-Trichlorophenol	M22-Ap0002724	NCP	%	68		30-130	Pass	
2,6-Dichlorophenol	M22-Ap0002724	NCP	%	71		30-130	Pass	
4-Chloro-3-methylphenol	M22-Ap0002724	NCP	%	81		30-130	Pass	
Pentachlorophenol	M22-Ap0002724	NCP	%	46		30-130	Pass	
Tetrachlorophenols - Total	M22-Ap0002724	NCP	%	70		30-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (non-Halogenated)</b>				Result 1				
2-Cyclohexyl-4,6-dinitrophenol	M22-Ap0002724	NCP	%	43		30-130	Pass	
2-Methyl-4,6-dinitrophenol	M22-Ap0002724	NCP	%	32		30-130	Pass	
2-Nitrophenol	M22-Ap0002724	NCP	%	79		30-130	Pass	
2,4-Dimethylphenol	M22-Ap0002724	NCP	%	91		30-130	Pass	
2,4-Dinitrophenol	M22-Ap0009357	NCP	%	74		30-130	Pass	
2-Methylphenol (o-Cresol)	M22-Ap0002724	NCP	%	77		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-Ap0002724	NCP	%	82		30-130	Pass	
4-Nitrophenol	M22-Ap0002724	NCP	%	102		30-130	Pass	
Dinoseb	M22-Ap0002724	NCP	%	86		30-130	Pass	
Phenol	M22-Ap0002724	NCP	%	91		30-130	Pass	
<b>Spike - % Recovery</b>								
				Result 1				
Chromium (hexavalent)	M22-Ap0012320	NCP	%	111		70-130	Pass	
Fluoride (Total)	M22-Ap0005694	NCP	%	73		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Arsenic	M22-Ap0004296	NCP	%	119		75-125	Pass	
Cadmium	M22-Ap0004296	NCP	%	93		75-125	Pass	
Chromium	M22-Ap0004296	NCP	%	123		75-125	Pass	
Copper	M22-Ap0004225	NCP	%	117		75-125	Pass	
Lead	M22-Ap0004225	NCP	%	105		75-125	Pass	
Mercury	M22-Ap0004296	NCP	%	117		75-125	Pass	
Molybdenum	M22-Ap0004296	NCP	%	115		75-125	Pass	
Nickel	M22-Ap0004296	NCP	%	111		75-125	Pass	
Selenium	M22-Ap0004296	NCP	%	109		75-125	Pass	
Silver	M22-Ap0004296	NCP	%	95		75-125	Pass	
Tin	M22-Ap0004296	NCP	%	114		75-125	Pass	
Zinc	M22-Ap0004225	NCP	%	115		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1				
Perfluorobutanoic acid (PFBA)	M22-Ap0007203	NCP	%	82		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ap0007203	NCP	%	86		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ap0007203	NCP	%	81		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ap0007203	NCP	%	81		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ap0007203	NCP	%	90		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ap0007203	NCP	%	95		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ap0007203	NCP	%	96		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0007203	NCP	%	93		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ap0007203	NCP	%	98		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0007203	NCP	%	99		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0007203	NCP	%	98		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1				
Perfluorooctane sulfonamide (FOSA)	M22-Ap0007203	NCP	%	96		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0007203	NCP	%	75		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0007203	NCP	%	92		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0007203	NCP	%	92		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0007203	NCP	%	89		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ap0007203	NCP	%	99		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0007203	NCP	%	111		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>				Result 1				
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0007203	NCP	%	85		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ap0007203	NCP	%	148		50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0007203	NCP	%	134		50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0007203	NCP	%	77		50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0007203	NCP	%	85		50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0007203	NCP	%	63		50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0007203	NCP	%	112		50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0007203	NCP	%	132		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-Ap0007203	NCP	%	90		50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0007203	NCP	%	121		50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0007203	NCP	%	109		50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0007203	NCP	%	91		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Organochlorine Pesticides</b>				Result 1				
Chlordanes - Total	M22-Ap0010610	CP	%	99		70-130	Pass	
4.4'-DDD	M22-Ap0010610	CP	%	114		70-130	Pass	
4.4'-DDE	M22-Ap0010610	CP	%	102		70-130	Pass	
4.4'-DDT	M22-Ap0010610	CP	%	87		70-130	Pass	
a-HCH	M22-Ap0010610	CP	%	78		70-130	Pass	
Aldrin	M22-Ap0010610	CP	%	84		70-130	Pass	
b-HCH	M22-Ap0010610	CP	%	85		70-130	Pass	
d-HCH	M22-Ap0010610	CP	%	85		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dieldrin	M22-Ap0010610	CP	%	118			70-130	Pass	
Endosulfan I	M22-Ap0010610	CP	%	104			70-130	Pass	
Endosulfan II	M22-Ap0010610	CP	%	104			70-130	Pass	
Endosulfan sulphate	M22-Ap0010610	CP	%	90			70-130	Pass	
Endrin	M22-Ap0010610	CP	%	97			70-130	Pass	
Endrin aldehyde	M22-Ap0010610	CP	%	92			70-130	Pass	
Endrin ketone	M22-Ap0010610	CP	%	108			70-130	Pass	
g-HCH (Lindane)	M22-Ap0010610	CP	%	127			70-130	Pass	
Heptachlor	M22-Ap0010610	CP	%	123			70-130	Pass	
Heptachlor epoxide	M22-Ap0010610	CP	%	78			70-130	Pass	
Hexachlorobenzene	M22-Ap0010610	CP	%	123			70-130	Pass	
Methoxychlor	M22-Ap0010610	CP	%	104			70-130	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-Ap0005534	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M22-Ap0005534	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M22-Ap0005534	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C10-C16	M22-Ap0005534	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M22-Ap0005534	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M22-Ap0005534	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
<b>Duplicate</b>									
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1	Result 2	RPD			
Acenaphthene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&i)fluoranthene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
<b>Duplicate</b>									
<b>Organochlorine Pesticides</b>				Result 1	Result 2	RPD			
Chlordanes - Total	M22-Ap0010161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4,4'-DDD	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDE	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDT	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate								
<b>Organochlorine Pesticides</b>				Result 1	Result 2	RPD		
Endrin aldehyde	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-Ap0010161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-Ap0010161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
<b>Polychlorinated Biphenyls</b>				Result 1	Result 2	RPD		
Aroclor-1016	M22-Ap0010161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-Ap0010161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-Ap0010161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-Ap0010161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-Ap0010161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-Ap0010161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-Ap0010161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-Ap0010161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
<b>Phenols (Halogenated)</b>				Result 1	Result 2	RPD		
2-Chlorophenol	M22-Ap0002723	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M22-Ap0002723	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M22-Ap0002723	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M22-Ap0002723	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	M22-Ap0002723	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-Ap0002723	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-Ap0002723	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-Ap0002723	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-Ap0002723	NCP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M22-Ap0002723	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-Ap0002723	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M22-Ap0002723	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	M22-Ap0002723	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-Ap0002723	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-Ap0002723	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M22-Ap0002723	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-Ap0002723	NCP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-Ap0002723	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-Ap0010606	CP	mg/kg	< 1	< 1	<1	30%	Pass
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Ap0011437	NCP	pH Units	9.7	9.7	pass	30%	Pass
Duplicate								
<b>Heavy Metals</b>				Result 1	Result 2	RPD		
Arsenic	M22-Ap0004296	NCP	mg/kg	32	33	2.0	30%	Pass
Cadmium	M22-Ap0004296	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M22-Ap0004296	NCP	mg/kg	8.5	8.8	3.0	30%	Pass
Copper	M22-Ap0004296	NCP	mg/kg	62	63	3.0	30%	Pass
Lead	M22-Ap0004296	NCP	mg/kg	100	110	2.0	30%	Pass
Mercury	M22-Ap0004296	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M22-Ap0004296	NCP	mg/kg	< 5	< 5	<1	30%	Pass



Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Nickel	M22-Ap0004296	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Selenium	M22-Ap0004296	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M22-Ap0004296	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-Ap0004296	NCP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M22-Ap0004296	NCP	mg/kg	28	28	2.0	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ap0007207	NCP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0007207	NCP	ug/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass

Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0007207	NCP	ug/kg	< 10	< 10	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0007207	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C6-C9	M22-Ap0010607	CP	mg/kg	< 20	< 20	<1	30%	Pass
Naphthalene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	M22-Ap0010607	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Hexachlorobutadiene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.1-Dichloroethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trichlorobenzene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1-Dichloroethene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1-Trichloroethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1.2-Tetrachloroethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2-Trichloroethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2.2-Tetrachloroethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dibromoethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichlorobenzene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloroethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloropropane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.3-Trichloropropane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trimethylbenzene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichlorobenzene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichloropropane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3.5-Trimethylbenzene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.4-Dichlorobenzene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzene	M22-Ap0010607	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Bromobenzene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

<b>Duplicate</b>								
<b>Volatile Organics</b>				Result 1	Result 2	RPD		
cis-1.3-Dichloropropene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	M22-Ap0010607	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	M22-Ap0010607	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	M22-Ap0010607	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	M22-Ap0010607	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1.2-Dichloroethene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.3-Dichloropropene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-Ap0010607	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total*	M22-Ap0010607	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-Ap0010607	CP	mg/kg	< 1	< 1	<1	30%	Pass
Cyanide (total)	M22-Ap0010607	CP	mg/kg	< 5	< 5	<1	30%	Pass
<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Fluoride (Total)	M22-Ap0010608	CP	mg/kg	< 100	< 100	<1	30%	Pass
<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-Ap0010609	CP	mg/kg	< 1	< 1	<1	30%	Pass
<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-Ap0010610	CP	mg/kg	< 1	< 1	<1	30%	Pass
% Moisture	M22-Ap0010610	CP	%	28	31	9.0	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).

**Authorised by:**

Catherine Wilson	Analytical Services Manager
Joseph Edouard	Senior Analyst (VIC)
Mary Makarios	Senior Analyst (NSW)
Linda Chouman	Senior Analyst (NSW)
Scott Beddoes	Senior Analyst (NSW)
Edward Lee	Senior Analyst (VIC)



**Glenn Jackson**  
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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Agon Environmental Pty Ltd - VIC  
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Fullarton  
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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: **Agon Lab Reports (Spoil Project)**

Report **877551-L**  
Project name **20220406043221-Eurofin-21**  
Project ID **JC0927**  
Received Date **Apr 06, 2022**

Client Sample ID			SX_OB_20220 405_08_16_SS _Primary_EUF	SX_OB_20220 405_08_25_SS _Triplicate_EU F	SX_OB_20220 405_12_30_SS _Primary_EUF	SX_OB_20220 405_16_10_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- Ap0010616	M22- Ap0010617	M22- Ap0010618	M22- Ap0010619
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 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	4.9	4.9	4.9	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	%	91	88	89	92
13C5-PFPeA (surr.)	1	%	104	94	99	99
13C5-PFHxA (surr.)	1	%	85	84	86	86
13C4-PFHpA (surr.)	1	%	92	79	87	93
13C8-PFOA (surr.)	1	%	70	109	67	58
13C5-PFNA (surr.)	1	%	85	65	76	68
13C6-PFDA (surr.)	1	%	116	83	90	90
13C2-PFUnDA (surr.)	1	%	89	61	68	54
13C2-PFDoDA (surr.)	1	%	84	43	45	43
13C2-PFTTeDA (surr.)	1	%	39	25	24	27

Client Sample ID			SX_OB_20220 405_08_16_SS _Primary_EUF	SX_OB_20220 405_08_25_SS _TriPLICATE_EU F	SX_OB_20220 405_12_30_SS _Primary_EUF	SX_OB_20220 405_16_10_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- Ap0010616	M22- Ap0010617	M22- Ap0010618	M22- Ap0010619
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 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	%	71	57	60	50
D3-N-MeFOSA (surr.)	1	%	81	69	50	72
D5-N-EtFOSA (surr.)	1	%	83	74	56	77
D7-N-MeFOSE (surr.)	1	%	156	142	117	108
D9-N-EtFOSE (surr.)	1	%	155	140	139	116
D5-N-EtFOSAA (surr.)	1	%	29	17	34	49
D3-N-MeFOSAA (surr.)	1	%	55	23	52	15
<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	%	56	121	100	55
18O2-PFHxS (surr.)	1	%	88	77	77	84
13C8-PFOS (surr.)	1	%	77	60	69	52
<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	%	92	86	104	95
13C2-6:2 FTSA (surr.)	1	%	81	71	82	86
13C2-8:2 FTSA (surr.)	1	%	177	108	102	89
13C2-10:2 FTSA (surr.)	1	%	91	46	44	41
<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 405_16_12_SS Duplicate_EU F	SX_OB_20220 405_19_57_SS Primary_EUF	SX_OB_20220 406_00_13_SS Primary_EUF	SX_OB_20220 406_04_05_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- Ap0010620	M22- Ap0010621	M22- Ap0010622	M22- Ap0010623
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 06, 2022	Apr 06, 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	4.9	4.9	4.9	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	%	89	92	84	84
13C5-PFPeA (surr.)	1	%	97	102	91	81
13C5-PFHxA (surr.)	1	%	85	90	78	76
13C4-PFHpA (surr.)	1	%	86	92	82	81
13C8-PFOA (surr.)	1	%	64	69	65	110
13C5-PFNA (surr.)	1	%	74	77	61	68
13C6-PFDA (surr.)	1	%	98	113	89	87
13C2-PFUnDA (surr.)	1	%	90	94	68	79
13C2-PFDoDA (surr.)	1	%	79	83	48	70
13C2-PFTTeDA (surr.)	1	%	40	51	22	48
<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	%	66	75	50	43
D3-N-MeFOSA (surr.)	1	%	54	58	53	38
D5-N-EtFOSA (surr.)	1	%	66	65	64	48
D7-N-MeFOSE (surr.)	1	%	151	154	123	95
D9-N-EtFOSE (surr.)	1	%	157	159	115	102
D5-N-EtFOSAA (surr.)	1	%	49	44	18	84
D3-N-MeFOSAA (surr.)	1	%	39	54	33	81

Client Sample ID			SX_OB_20220 405_16_12_SS Duplicate_EU F	SX_OB_20220 405_19_57_SS Primary_EUF	SX_OB_20220 406_00_13_SS Primary_EUF	SX_OB_20220 406_04_05_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- Ap0010620	M22- Ap0010621	M22- Ap0010622	M22- Ap0010623
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 06, 2022	Apr 06, 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	%	60	79	53	102
18O2-PFHxS (surr.)	1	%	84	89	87	84
13C8-PFOS (surr.)	1	%	76	74	63	72
<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	%	86	101	73	88
13C2-6:2 FTSA (surr.)	1	%	75	88	65	63
13C2-8:2 FTSA (surr.)	1	%	141	120	103	107
13C2-10:2 FTSA (surr.)	1	%	97	87	39	76
<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 405_08_16_SS Primary_EUF	SX_OB_20220 405_08_25_SS Triplicate_EU F	SX_OB_20220 405_12_30_SS Primary_EUF	SX_OB_20220 405_16_10_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- Ap0010624	M22- Ap0010625	M22- Ap0010626	M22- Ap0010627
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 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	6.4	6.4	6.4	6.4
pH (off)	0.1	pH Units	8.8	8.9	8.7	8.8



Client Sample ID			SX_OB_20220 405_08_16_SS _Primary_EUF	SX_OB_20220 405_08_25_SS _Triuplicate_EU F	SX_OB_20220 405_12_30_SS _Primary_EUF	SX_OB_20220 405_16_10_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- Ap0010624	M22- Ap0010625	M22- Ap0010626	M22- Ap0010627
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 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	%	75	69	85	79
13C5-PFPeA (surr.)	1	%	75	71	74	51
13C5-PFHxA (surr.)	1	%	63	68	79	52
13C4-PFHpA (surr.)	1	%	71	71	87	55
13C8-PFOA (surr.)	1	%	74	97	82	71
13C5-PFNA (surr.)	1	%	67	66	87	56
13C6-PFDA (surr.)	1	%	106	101	143	78
13C2-PFUnDA (surr.)	1	%	98	117	144	82
13C2-PFDoDA (surr.)	1	%	100	112	137	64
13C2-PFTeDA (surr.)	1	%	88	75	143	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	%	37	49	56	20
D3-N-MeFOSA (surr.)	1	%	29	11	19	11
D5-N-EtFOSA (surr.)	1	%	31	16	22	14
D7-N-MeFOSE (surr.)	1	%	85	67	91	49
D9-N-EtFOSE (surr.)	1	%	81	69	102	51
D5-N-EtFOSAA (surr.)	1	%	93	118	154	146
D3-N-MeFOSAA (surr.)	1	%	99	118	181	159
<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

<b>Client Sample ID</b>			<a href="#">SX_OB_20220405_08_16_SS_Primary_EUF</a>	<a href="#">SX_OB_20220405_08_25_SS_Triplicate_EUF</a>	<a href="#">SX_OB_20220405_12_30_SS_Primary_EUF</a>	<a href="#">SX_OB_20220405_16_10_SS_Primary_EUF</a>
<b>Sample Matrix</b>			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
<b>Eurofins Sample No.</b>			M22-Ap0010624	M22-Ap0010625	M22-Ap0010626	M22-Ap0010627
<b>Date Sampled</b>			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 2022
<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
Perfluorodecane sulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	58	114	89	54
18O2-PFHxS (surr.)	1	%	84	85	91	73
13C8-PFOS (surr.)	1	%	87	82	94	66
<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-perfluorodecane sulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecane sulfonic 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	%	70	73	123	44
13C2-6:2 FTSA (surr.)	1	%	46	41	60	31
13C2-8:2 FTSA (surr.)	1	%	144	90	178	37
13C2-10:2 FTSA (surr.)	1	%	112	102	156	63
<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>			<a href="#">SX_OB_20220405_16_12_SS_Duplicate_EUF</a>	<a href="#">SX_OB_20220405_19_57_SS_Primary_EUF</a>	<a href="#">SX_OB_20220406_00_13_SS_Primary_EUF</a>	<a href="#">SX_OB_20220406_04_05_SS_Primary_EUF</a>
<b>Sample Matrix</b>			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
<b>Eurofins Sample No.</b>			M22-Ap0010628	M22-Ap0010629	M22-Ap0010630	M22-Ap0010631
<b>Date Sampled</b>			Apr 05, 2022	Apr 05, 2022	Apr 06, 2022	Apr 06, 2022
<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	6.4	6.4	6.4	6.4
pH (off)	0.1	pH Units	8.8	8.9	9.0	9.0
<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

Client Sample ID			SX_OB_20220 405_16_12_SS Duplicate_EU F	SX_OB_20220 405_19_57_SS Primary_EUF	SX_OB_20220 406_00_13_SS Primary_EUF	SX_OB_20220 406_04_05_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- Ap0010628	M22- Ap0010629	M22- Ap0010630	M22- Ap0010631
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 06, 2022	Apr 06, 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	%	77	78	81	81
13C5-PFPeA (surr.)	1	%	76	75	82	80
13C5-PFHxA (surr.)	1	%	72	72	77	77
13C4-PFHpA (surr.)	1	%	81	80	82	79
13C8-PFOA (surr.)	1	%	83	78	63	115
13C5-PFNA (surr.)	1	%	83	77	78	73
13C6-PFDA (surr.)	1	%	102	128	115	125
13C2-PFUnDA (surr.)	1	%	91	109	106	110
13C2-PFDoDA (surr.)	1	%	83	85	75	93
13C2-PFTeDA (surr.)	1	%	62	79	53	77
<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	%	30	44	45	45
D3-N-MeFOSA (surr.)	1	%	20	18	23	11
D5-N-EtFOSA (surr.)	1	%	15	12	23	16
D7-N-MeFOSE (surr.)	1	%	43	65	77	55
D9-N-EtFOSE (surr.)	1	%	55	69	76	58
D5-N-EtFOSAA (surr.)	1	%	137	132	159	106
D3-N-MeFOSAA (surr.)	1	%	100	153	141	100
<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	%	61	69	56	111
18O2-PFHxS (surr.)	1	%	84	80	92	92
13C8-PFOS (surr.)	1	%	85	88	78	81

Client Sample ID			SX_OB_20220 405_16_12_SS Duplicate_EU F	SX_OB_20220 405_19_57_SS Primary_EUF	SX_OB_20220 406_00_13_SS Primary_EUF	SX_OB_20220 406_04_05_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- Ap0010628	M22- Ap0010629	M22- Ap0010630	M22- Ap0010631
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 06, 2022	Apr 06, 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	%	61	81	69	68
13C2-6:2 FTSA (surr.)	1	%	50	57	61	52
13C2-8:2 FTSA (surr.)	1	%	112	140	136	141
13C2-10:2 FTSA (surr.)	1	%	54	84	78	90
<b>PFASs Summations</b>						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

**Sample History**

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

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

Description	Testing Site	Extracted	Holding Time
AUS Leaching Procedure			
pH (initial) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Apr 07, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Apr 07, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Apr 07, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 07, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 07, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 07, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 07, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 06, 2022	

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<b>Project Name:</b>	20220406043221-Eurofin-21	<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_20220405_08_16_S_S_Primary_EU_F	Apr 05, 2022	8:16AM	Soil	M22-Ap0010606		X	X	X
2	SX_OB_20220405_08_25_S_S_Triplicate_EUF	Apr 05, 2022	8:25AM	Soil	M22-Ap0010607		X	X	X
3	SX_OB_20220405_12_30_S_S_Primary_EU_F	Apr 05, 2022	12:30PM	Soil	M22-Ap0010608		X	X	X

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**Address:** 3/224 Glen Osmond Road  
Fullarton  
SA 5063  
  
**Project Name:** 20220406043221-Eurofin-21  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 877551  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Apr 6, 2022 11:59 AM  
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**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>									
4	SX_OB_20220405_16_10_S_S_Primary_EU_F	Apr 05, 2022	4:10PM	Soil	M22-Ap0010609		X	X	X
5	SX_OB_20220405_16_12_S_S_Duplicate_EU_F	Apr 05, 2022	4:12PM	Soil	M22-Ap0010610		X	X	X
6	SX_OB_20220405_16_27_S_R_Rinsate_EU_F	Apr 05, 2022	4:27PM	Water	M22-Ap0010611			X	
7	SX_OB_20220405_16_28_S	Apr 05, 2022	4:28PM	Water	M22-Ap0010612			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>									
	B_Blank_EUF								
8	SX_OB_20220405_19_57_S_S_Primary_EUF	Apr 05, 2022	7:57PM	Soil	M22-Ap0010613		X	X	X
9	SX_OB_20220406_00_13_S_S_Primary_EUF	Apr 06, 2022	12:13AM	Soil	M22-Ap0010614		X	X	X
10	SX_OB_20220406_04_05_S_S_Primary_EUF	Apr 06, 2022	4:05AM	Soil	M22-Ap0010615		X	X	X
11	SX_OB_20220	Apr 05, 2022	8:16AM	AUS Leachate	M22-	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>									
	405_08_16_S S_Primary_EU F			- pH 5.0	Ap0010616				
12	SX_OB_20220 405_08_25_S S_Triplicate_E UF	Apr 05, 2022	8:25AM	AUS Leachate - pH 5.0	M22- Ap0010617	X		X	
13	SX_OB_20220 405_12_30_S S_Primary_EU F	Apr 05, 2022	12:30PM	AUS Leachate - pH 5.0	M22- Ap0010618	X		X	
14	SX_OB_20220 405_16_10_S S_Primary_EU	Apr 05, 2022	4:10PM	AUS Leachate - pH 5.0	M22- Ap0010619	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>									
	F								
15	SX_OB_20220405_16_12_S_S_Duplicate_EUF	Apr 05, 2022	4:12PM	AUS Leachate - pH 5.0	M22-Ap0010620	X		X	
16	SX_OB_20220405_19_57_S_S_Primary_EUF	Apr 05, 2022	7:57PM	AUS Leachate - pH 5.0	M22-Ap0010621	X		X	
17	SX_OB_20220406_00_13_S_S_Primary_EUF	Apr 06, 2022	12:13AM	AUS Leachate - pH 5.0	M22-Ap0010622	X		X	
18	SX_OB_20220	Apr 06, 2022	4:05AM	AUS Leachate	M22-	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>									
	406_04_05_S S_Primary_EU F			- pH 5.0	Ap0010623				
19	SX_OB_20220 405_08_16_S S_Primary_EU F	Apr 05, 2022	8:16AM	AUS Leachate - Reagent Water	M22- Ap0010624	X		X	
20	SX_OB_20220 405_08_25_S S_Triplicate_E UF	Apr 05, 2022	8:25AM	AUS Leachate - Reagent Water	M22- Ap0010625	X		X	
21	SX_OB_20220 405_12_30_S S_Primary_EU	Apr 05, 2022	12:30PM	AUS Leachate - Reagent Water	M22- Ap0010626	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>									
	F								
22	SX_OB_20220405_16_10_S_S_Primary_EU_F	Apr 05, 2022	4:10PM	AUS Leachate - Reagent Water	M22-Ap0010627	X		X	
23	SX_OB_20220405_16_12_S_S_Duplicate_EUF	Apr 05, 2022	4:12PM	AUS Leachate - Reagent Water	M22-Ap0010628	X		X	
24	SX_OB_20220405_19_57_S_S_Primary_EU_F	Apr 05, 2022	7:57PM	AUS Leachate - Reagent Water	M22-Ap0010629	X		X	
25	SX_OB_20220	Apr 06, 2022	12:13AM	AUS Leachate	M22-	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>									
	406_00_13_S S_Primary_EU F			- Reagent Water	Ap0010630				
26	SX_OB_20220 406_04_05_S S_Primary_EU F	Apr 06, 2022	4:05AM	AUS Leachate - Reagent Water	M22- Ap0010631	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)	%	99		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	110		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	96		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	93		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	96		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	96		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	101		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	117		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	108		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	115		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	124		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code		
<b>LCS - % Recovery</b>									
<b>Perfluoroalkyl sulfonamido substances</b>									
Perfluorooctane sulfonamide (FOSA)	%	103			50-150	Pass			
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	119			50-150	Pass			
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	67			50-150	Pass			
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	93			50-150	Pass			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	106			50-150	Pass			
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	87			50-150	Pass			
<b>LCS - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>									
Perfluorobutanesulfonic acid (PFBS)	%	98			50-150	Pass			
Perfluorononanesulfonic acid (PFNS)	%	91			50-150	Pass			
Perfluoropropanesulfonic acid (PFPrS)	%	121			50-150	Pass			
Perfluoropentanesulfonic acid (PFPeS)	%	108			50-150	Pass			
Perfluorohexanesulfonic acid (PFHxS)	%	102			50-150	Pass			
Perfluoroheptanesulfonic acid (PFHpS)	%	97			50-150	Pass			
Perfluorooctanesulfonic acid (PFOS)	%	103			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)	%	104			50-150	Pass			
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	142			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)	%	121			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-Ap0010625	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0010625	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-Ap0010625	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0010625	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0010625	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0010625	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0010625	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-Ap0010625	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0010625	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-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0010625	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-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0010625	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0010625	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass

**Comments**
**Sample Integrity**

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

**Qualifier Codes/Comments**

Code	Description
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).

**Authorised by:**

Catherine Wilson	Analytical Services Manager
Joseph Edouard	Senior Analyst (VIC)
Mary Makarios	Senior Analyst (NSW)



**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: **Agon Lab Reports (Spoil Project)**

Report **877551-W**  
Project name **20220406043221-Eurofin-21**  
Project ID **JC0927**  
Received Date **Apr 06, 2022**

Client Sample ID			SX_OB_20220 405_16_27_SR Rinsate_EUF	SX_OB_20220 405_16_28_SB Blank_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22- Ap0010611	M22- Ap0010612
Date Sampled			Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit		
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	99	95
13C5-PFPeA (surr.)	1	%	108	107
13C5-PFHxA (surr.)	1	%	105	99
13C4-PFHpA (surr.)	1	%	96	94
13C8-PFOA (surr.)	1	%	84	82
13C5-PFNA (surr.)	1	%	81	79
13C6-PFDA (surr.)	1	%	67	58
13C2-PFUnDA (surr.)	1	%	71	65
13C2-PFDoDA (surr.)	1	%	64	69
13C2-PFTeDA (surr.)	1	%	44	55
<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	%	83	65

Client Sample ID			SX_OB_20220 405_16_27_SR _Rinsate_EUF	SX_OB_20220 405_16_28_SB _Blank_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22- Ap0010611	M22- Ap0010612
Date Sampled			Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit		
<b>Perfluoroalkyl sulfonamido substances</b>				
D3-N-MeFOSA (surr.)	1	%	80	98
D5-N-EtFOSA (surr.)	1	%	66	85
D7-N-MeFOSE (surr.)	1	%	71	59
D9-N-EtFOSE (surr.)	1	%	67	58
D5-N-EtFOSAA (surr.)	1	%	66	66
D3-N-MeFOSAA (surr.)	1	%	58	54
<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	%	101	94
18O2-PFHxS (surr.)	1	%	91	89
13C8-PFOS (surr.)	1	%	95	94
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
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	%	103	86
13C2-6:2 FTSA (surr.)	1	%	104	79
13C2-8:2 FTSA (surr.)	1	%	118	119
13C2-10:2 FTSA (surr.)	1	%	65	67
<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	Apr 06, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Apr 06, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Apr 06, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Apr 06, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Apr 06, 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>	Apr 6, 2022 11:59 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	877551	<b>Due:</b>	Apr 13, 2022
<b>Project Name:</b>	20220406043221-Eurofin-21	<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_20220405_08_16_S_S_Primary_EU_F	Apr 05, 2022	8:16AM	Soil	M22-Ap0010606		X	X	X
2	SX_OB_20220405_08_25_S_S_Triplicate_EUF	Apr 05, 2022	8:25AM	Soil	M22-Ap0010607		X	X	X
3	SX_OB_20220405_12_30_S_S_Primary_EU_F	Apr 05, 2022	12:30PM	Soil	M22-Ap0010608		X	X	X

**Company Name:** Agon Environmental Pty Ltd - VIC  
**Address:** 3/224 Glen Osmond Road  
Fullarton  
SA 5063  
**Project Name:** 20220406043221-Eurofin-21  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 877551  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Apr 6, 2022 11:59 AM  
**Due:** Apr 13, 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>									
4	SX_OB_20220405_16_10_S_S_Primary_EU_F	Apr 05, 2022	4:10PM	Soil	M22-Ap0010609		X	X	X
5	SX_OB_20220405_16_12_S_S_Duplicate_EU_F	Apr 05, 2022	4:12PM	Soil	M22-Ap0010610		X	X	X
6	SX_OB_20220405_16_27_S_R_Rinsate_EU_F	Apr 05, 2022	4:27PM	Water	M22-Ap0010611			X	
7	SX_OB_20220405_16_28_S	Apr 05, 2022	4:28PM	Water	M22-Ap0010612			X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 6, 2022 11:59 AM
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<b>Project Name:</b>	20220406043221-Eurofin-21	<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>									
	B_Blank_EUF								
8	SX_OB_20220405_19_57_S_S_Primary_EUF	Apr 05, 2022	7:57PM	Soil	M22-Ap0010613		X	X	X
9	SX_OB_20220406_00_13_S_S_Primary_EUF	Apr 06, 2022	12:13AM	Soil	M22-Ap0010614		X	X	X
10	SX_OB_20220406_04_05_S_S_Primary_EUF	Apr 06, 2022	4:05AM	Soil	M22-Ap0010615		X	X	X
11	SX_OB_20220	Apr 05, 2022	8:16AM	AUS Leachate	M22-	X		X	



<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 6, 2022 11:59 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	877551	<b>Due:</b>	Apr 13, 2022
<b>Project Name:</b>	20220406043221-Eurofin-21	<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>									
	405_08_16_S S_Primary_EU F			- pH 5.0	Ap0010616				
12	SX_OB_20220 405_08_25_S S_Triplicate_E UF	Apr 05, 2022	8:25AM	AUS Leachate - pH 5.0	M22- Ap0010617	X		X	
13	SX_OB_20220 405_12_30_S S_Primary_EU F	Apr 05, 2022	12:30PM	AUS Leachate - pH 5.0	M22- Ap0010618	X		X	
14	SX_OB_20220 405_16_10_S S_Primary_EU	Apr 05, 2022	4:10PM	AUS Leachate - pH 5.0	M22- Ap0010619	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 6, 2022 11:59 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	877551	<b>Due:</b>	Apr 13, 2022
<b>Project Name:</b>	20220406043221-Eurofin-21	<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>									
	F								
15	SX_OB_20220405_16_12_S_S_Duplicate_EUF	Apr 05, 2022	4:12PM	AUS Leachate - pH 5.0	M22-Ap0010620	X		X	
16	SX_OB_20220405_19_57_S_S_Primary_EUF	Apr 05, 2022	7:57PM	AUS Leachate - pH 5.0	M22-Ap0010621	X		X	
17	SX_OB_20220406_00_13_S_S_Primary_EUF	Apr 06, 2022	12:13AM	AUS Leachate - pH 5.0	M22-Ap0010622	X		X	
18	SX_OB_20220	Apr 06, 2022	4:05AM	AUS Leachate	M22-	X		X	

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<b>Project Name:</b>	20220406043221-Eurofin-21	<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>									
	406_04_05_S S_Primary_EU F			- pH 5.0	Ap0010623				
19	SX_OB_20220 405_08_16_S S_Primary_EU F	Apr 05, 2022	8:16AM	AUS Leachate - Reagent Water	M22- Ap0010624	X		X	
20	SX_OB_20220 405_08_25_S S_Triplicate_E UF	Apr 05, 2022	8:25AM	AUS Leachate - Reagent Water	M22- Ap0010625	X		X	
21	SX_OB_20220 405_12_30_S S_Primary_EU	Apr 05, 2022	12:30PM	AUS Leachate - Reagent Water	M22- Ap0010626	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 6, 2022 11:59 AM
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<b>Project Name:</b>	20220406043221-Eurofin-21	<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>									
	F								
22	SX_OB_20220405_16_10_S_S_Primary_EU_F	Apr 05, 2022	4:10PM	AUS Leachate - Reagent Water	M22-Ap0010627	X		X	
23	SX_OB_20220405_16_12_S_S_Duplicate_EUF	Apr 05, 2022	4:12PM	AUS Leachate - Reagent Water	M22-Ap0010628	X		X	
24	SX_OB_20220405_19_57_S_S_Primary_EU_F	Apr 05, 2022	7:57PM	AUS Leachate - Reagent Water	M22-Ap0010629	X		X	
25	SX_OB_20220	Apr 06, 2022	12:13AM	AUS Leachate	M22-	X		X	

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<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	877551	<b>Due:</b>	Apr 13, 2022
<b>Project Name:</b>	20220406043221-Eurofin-21	<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>									
	406_00_13_S S_Primary_EU F			- Reagent Water	Ap0010630				
26	SX_OB_20220 406_04_05_S S_Primary_EU F	Apr 06, 2022	4:05AM	AUS Leachate - Reagent Water	M22- Ap0010631	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)	%	103		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	122		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	105		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	97		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	94		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	97		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	105		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	121		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	106		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	124		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	108		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)	%	116			50-150	Pass		
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	139			50-150	Pass		
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	125			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)	%	105			50-150	Pass		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	105			50-150	Pass		
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	92			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	92			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	87			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	113			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	124			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	113			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	115			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	91			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	70			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)	%	122			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	135			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	92			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	112			50-150	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>								
Perfluorobutanoic acid (PFBA)	M22-Ap0017212	NCP	%	102		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ap0017212	NCP	%	86		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ap0017212	NCP	%	102		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ap0017212	NCP	%	97		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ap0017212	NCP	%	108		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ap0017212	NCP	%	98		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ap0017212	NCP	%	99		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0017212	NCP	%	123		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ap0017212	NCP	%	108		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0017212	NCP	%	119		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0017212	NCP	%	104		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>								
Perfluorooctane sulfonamide (FOSA)	M22-Ap0017212	NCP	%	115		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0017212	NCP	%	108		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0017212	NCP	%	106		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0017212	NCP	%	94		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0017212	NCP	%	100		50-150	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ap0017212	NCP	%	120			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0017212	NCP	%	114			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0017212	NCP	%	97			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ap0017212	NCP	%	70			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0017212	NCP	%	117			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0017212	NCP	%	109			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0017212	NCP	%	111			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0017212	NCP	%	103			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0017212	NCP	%	96			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0017212	NCP	%	55			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-Ap0017212	NCP	%	115			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0017212	NCP	%	147			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0017212	NCP	%	89			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0017212	NCP	%	94			50-150	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Perfluoroalkyl carboxylic acids (PFCA)</b>				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S22-Ap0011654	NCP	ug/L	0.57	0.58	2.0	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S22-Ap0011654	NCP	ug/L	0.71	0.83	16	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S22-Ap0011654	NCP	ug/L	0.75	0.78	4.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S22-Ap0011654	NCP	ug/L	0.36	0.38	6.0	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ap0017211	NCP	ug/L	0.03	0.03	11	30%	Pass	
Perfluorononanoic acid (PFNA)	S22-Ap0011654	NCP	ug/L	0.02	0.02	3.0	30%	Pass	
Perfluorodecanoic acid (PFDA)	S22-Ap0011654	NCP	ug/L	0.02	0.01	15	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S22-Ap0011654	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S22-Ap0011654	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S22-Ap0011654	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S22-Ap0011654	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)	S22-Ap0011654	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S22-Ap0011654	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S22-Ap0011654	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S22-Ap0011654	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S22-Ap0011654	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S22-Ap0011654	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S22-Ap0011654	NCP	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)	S22-Ap0011654	NCP	ug/L	0.13	0.13	1.0	30%	Pass
Perfluorononanesulfonic acid (PFNS)	S22-Ap0011654	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	S22-Ap0011654	NCP	ug/L	0.01	0.02	11	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	S22-Ap0011654	NCP	ug/L	0.04	0.05	4.0	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0017211	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	S22-Ap0011654	NCP	ug/L	0.02	0.02	14	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0017211	NCP	ug/L	0.02	0.02	16	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	S22-Ap0011654	NCP	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)	S22-Ap0011654	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0017211	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S22-Ap0011654	NCP	ug/L	< 0.05	< 0.05	<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:**

Catherine Wilson	Analytical Services Manager
Joseph Edouard	Senior Analyst (VIC)



**Glenn Jackson**  
General Manager


Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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

CHAIN OF CUSTODY DOCUMENTATION							 Australian Laboratory Services Pty Ltd													
CLIENT: Agon Environmental				SAMPLER: Emma, S - EP Risk Brandon - Agon																
ADDRESS / OFFICE: Melbourne				MOBILE 1: +61 400 826 907 (Craig Trimbur)																
PROJECT MANAGER (PM): Craig Trimbur				MOBILE 2: +61 490 411 004 (David Lawson)																
PROJECT ID: JC0927				EMAIL REPORT TO: Labreports.TST@agonenviro.com.au agonenvironmental@esdat.com.au motherhublabresults1@wgtp.com.au																
SITE: 20220406044120-ALS-14 P.O. NO.:				EMAIL INVOICE TO: (if different to report) Labreports.TST@agonenviro.com.au agonenvironmental@esdat.com.au																
RESULTS REQUIRED (Date): 5 days QUOTE NO.: ME-150-19 WGTP				ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)																
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL: _____ _____ _____ _____		Notes:																		
SAMPLE INFORMATION (note: S = Soil, W=Water) _____ _____ _____		CONTAINER INFORMATION _____ _____ _____																		
ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles	Spot Sample Prep	P-16 plus Cr	PFAS 28 Extended suite	AS, P PFAS - Extended Suite (Lab to determine pH)	DI Leachate PFAS - Extended Suite									
1	SX_OB_20220404_08_33_SS_Primary_ALS	S	4/04/2022	08:33	Bucket	1	x	x	x	x	x									
2	SX_OB_20220404_08_34_SS_Duplicate_ALS	S	4/04/2022	08:34	Bucket	1	x	x	x	x	x									
3	SX_OB_20220404_09_14_SR_Rinsate_ALS	W	4/04/2022	09:14	Bottle	1			x											
4	SX_OB_20220404_09_16_SB_Blank_ALS	W	4/04/2022	09:16	Bottle	1			x											
5	SX_OB_20220404_12_01_SS_Primary_ALS	S	4/04/2022	12:01	Bucket	1	x	x	x	x	x									
6	SX_OB_20220404_16_12_SS_Primary_ALS	S	4/04/2022	16:12	Bucket	1	x	x	x	x	x									
7	SX_OB_20220404_16_20_SS_Triplicate_ALS	S	4/04/2022	16:20	Bucket	1	x	x	x	x	x									
8	SX_OB_20220404_20_03_SS_Primary_ALS	S	4/04/2022	20:03	Bucket	1	x	x	x	x	x									
9	SX_OB_20220405_00_03_SS_Primary_ALS	S	5/04/2022	00:03	Bucket	1	x	x	x	x	x									
RELINQUISHED BY:							RECEIVED BY:							METHOD OF SHIPMENT:						
Name: Emma, S			Date: 05/04/22				Name: <i>Maria</i>			Date: 5/4				Con' Note No:						
Of: EP Risk			Time: 10:19am				Of: <i>M</i>			Time: 13:30				Transport Co:						
Name:							Date:							Time:						
Of:							Of:							Time:						

Environmental Division  
 Melbourne  
 Work Order Reference  
**EM2206146**



Telephone : + 61-3-8549 9600

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

## CERTIFICATE OF ANALYSIS

<b>Work Order</b> : <b>EM2206146</b> <b>Client</b> : <b>AGON ENVIRONMENTAL PTY LTD</b> <b>Contact</b> : Craig Trimbur <b>Address</b> : D1.1 63-85 TURNER STREET PORT MELBOURNE 3207  <b>Telephone</b> : ---- <b>Project</b> : JC0927 <b>Order number</b> : ---- <b>C-O-C number</b> : 20220405044120-ALS-14 <b>Sampler</b> : Brandon - Agon, Emma. S - EP Risk <b>Site</b> : 20220405044120-ALS-14 <b>Quote number</b> : EN/150/19 -WGTP -Bulk Sample Quote <b>No. of samples received</b> : 16 <b>No. of samples analysed</b> : 14	<b>Page</b> : 1 of 26 <b>Laboratory</b> : Environmental Division Melbourne <b>Contact</b> : Josh Alexander <b>Address</b> : 4 Westall Rd Springvale VIC Australia 3171  <b>Telephone</b> : +61-3-8549 9600 <b>Date Samples Received</b> : 05-Apr-2022 13:30 <b>Date Analysis Commenced</b> : 06-Apr-2022 <b>Issue Date</b> : 12-Apr-2022 17:14
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

### Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC



## General Comments

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

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP074-UT: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074-WF: Where reported, Sum of trichlorobenzenes is the sum of the reported concentrations of 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene, and 1,3,5-Trichlorobenzene at or above the LOR.
- 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.



## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS	SX_OB_20220404_16_12_SS_Primary_ALS	SX_OB_20220404_16_20_SS_Triplicate_ALS
Sampling date / time				04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01	04-Apr-2022 16:12	04-Apr-2022 16:20
Compound	CAS Number	LOR	Unit	EM2206146-001	EM2206146-002	EM2206146-005	EM2206146-006	EM2206146-007
				Result	Result	Result	Result	Result
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05



## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS	SX_OB_20220404_16_12_SS_Primary_ALS	SX_OB_20220404_16_20_SS_Triplicate_ALS
Sampling date / time				04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01	04-Apr-2022 16:12	04-Apr-2022 16:20
Compound	CAS Number	LOR	Unit	EM2206146-001	EM2206146-002	EM2206146-005	EM2206146-006	EM2206146-007
				Result	Result	Result	Result	Result
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	91.9	102	92.2	90.0	98.8
13C8-PFOA	----	0.02	%	102	99.0	99.1	101	101





## Analytical Results

Sub-Matrix: ASLP LEACHATE (Matrix: WATER)			Sample ID		SX_OB_20220404_20 _03_SS_Primary_ALS	SX_OB_20220405_00 _03_SS_Primary_ALS	----	----	----
Sampling date / time			04-Apr-2022 20:03		05-Apr-2022 00:03		----	----	----
Compound	CAS Number	LOR	Unit	EM2206146-008	EM2206146-009	-----	-----	-----	
				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	0.1	µg/L	<0.1	<0.1	----	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----	
<b>EP231C: Perfluoroalkyl Sulfonamides</b>									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----	



## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220404_20 _03_SS_Primary_ALS	SX_OB_20220405_00 _03_SS_Primary_ALS	----	----	----
Sampling date / time				04-Apr-2022 20:03	05-Apr-2022 00:03	----	----	----
Compound	CAS Number	LOR	Unit	EM2206146-008	EM2206146-009	-----	-----	-----
				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	%	<b>96.3</b>	<b>95.1</b>	----	----	----
13C8-PFOA	----	0.02	%	<b>104</b>	<b>99.6</b>	----	----	----



## Analytical Results

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

Sample ID

				SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS	SX_OB_20220404_16_12_SS_Primary_ALS	SX_OB_20220404_16_20_SS_Triplicate_ALS
Sampling date / time				04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01	04-Apr-2022 16:12	04-Apr-2022 16:20
Compound	CAS Number	LOR	Unit	EM2206146-010	EM2206146-011	EM2206146-012	EM2206146-013	EM2206146-014
				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	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05



## Analytical Results

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

Sample ID

				SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS	SX_OB_20220404_16_12_SS_Primary_ALS	SX_OB_20220404_16_20_SS_Triplicate_ALS
Sampling date / time				04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01	04-Apr-2022 16:12	04-Apr-2022 16:20
Compound	CAS Number	LOR	Unit	EM2206146-010	EM2206146-011	EM2206146-012	EM2206146-013	EM2206146-014
				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	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	96.3	94.0	90.6	100	97.5
13C8-PFOA	----	0.02	%	103	100	102	102	102



## Analytical Results

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

Sample ID

			SX_OB_20220404_20_03_SS_Primary_ALS	SX_OB_20220405_00_03_SS_Primary_ALS	----	----	----	
Sampling date / time			04-Apr-2022 20:03	05-Apr-2022 00:03	----	----	----	
Compound	CAS Number	LOR	Unit	EM2206146-015	EM2206146-016	-----	-----	-----
				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	0.1	µg/L	<0.1	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----
<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: DI WATER LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220404_20 _03_SS_Primary_ALS	SX_OB_20220405_00 _03_SS_Primary_ALS	----	----	----
				04-Apr-2022 20:03	05-Apr-2022 00:03	----	----	----
Compound	CAS Number	LOR	Unit	EM2206146-015	EM2206146-016	-----	-----	-----
				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	%	97.1	99.9	----	----	----
13C8-PFOA	----	0.02	%	100	100	----	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS	SX_OB_20220404_16_12_SS_Primary_ALS	SX_OB_20220404_16_20_SS_Triplicate_ALS
Sampling date / time				04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01	04-Apr-2022 16:12	04-Apr-2022 16:20
Compound	CAS Number	LOR	Unit	EM2206146-001	EM2206146-002	EM2206146-005	EM2206146-006	EM2206146-007
				Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
pH (CaCl2)	----	0.1	pH Unit	7.8	7.8	7.8	7.8	7.7
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	25.1	26.6	30.9	28.9	32.2
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	16	17	27	15	28
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	5	mg/kg	112	102	118	117	121
Copper	7440-50-8	5	mg/kg	60	60	60	52	65
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	<5	<5
Nickel	7440-02-0	5	mg/kg	185	183	184	166	203
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	86	85	106	81	108
<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	1.4	1.2	<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	200	220	210	220	220
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Initial pH	----	0.1	pH Unit	9.4	9.6	9.4	9.5	9.4
After HCl pH	----	0.1	pH Unit	1.4	1.4	1.4	1.4	1.4
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	5.0	5.0
Final pH	----	0.1	pH Unit	4.9	5.0	5.1	5.0	4.9
<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_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS	SX_OB_20220404_16_12_SS_Primary_ALS	SX_OB_20220404_16_20_SS_Triplicate_ALS
Sampling date / time				04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01	04-Apr-2022 16:12	04-Apr-2022 16:20
Compound	CAS Number	LOR	Unit	EM2206146-001	EM2206146-002	EM2206146-005	EM2206146-006	EM2206146-007
				Result	Result	Result	Result	Result
<b>EP074A: Monocyclic Aromatic Hydrocarbons - Continued</b>								
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
<b>EP074H: Naphthalene</b>								
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
<b>EP074I: Volatile Halogenated Compounds</b>								
Vinyl chloride	75-01-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethene	75-35-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	156-60-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene	156-59-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	67-66-3	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	71-55-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride	56-23-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	107-06-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethene	79-01-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	79-00-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethene	127-18-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	630-20-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	79-34-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Hexachlorobutadiene	87-68-3	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Chlorobenzene	108-90-7	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	106-46-7	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichlorobenzene	95-50-1	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,2,4-Trichlorobenzene	120-82-1	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
^ Sum of volatile chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
^ Sum of other chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
<b>EP075A: Phenolic Compounds (Halogenated)</b>								





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS	SX_OB_20220404_16_12_SS_Primary_ALS	SX_OB_20220404_16_20_SS_Triplicate_ALS
Sampling date / time				04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01	04-Apr-2022 16:12	04-Apr-2022 16:20
Compound	CAS Number	LOR	Unit	EM2206146-001	EM2206146-002	EM2206146-005	EM2206146-006	EM2206146-007
				Result	Result	Result	Result	Result
<b>EP075A: Phenolic Compounds (Halogenated) - Continued</b>								
2-Chlorophenol	95-57-8	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
2,4-Dichlorophenol	120-83-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
2,6-Dichlorophenol	87-65-0	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,4,5-Trichlorophenol	95-95-4	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
Phenol	108-95-2	1	mg/kg	<1	<1	<1	<1	<1
2-Methylphenol	95-48-7	1	mg/kg	<1	<1	<1	<1	<1
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	<1	<1	<1
2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	<1	<1	<1
2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	<5	<5	<5
4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	<5	<5	<5
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	<5	<5	<5
Dinoseb	88-85-7	20	mg/kg	<20	<20	<20	<20	<20
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	20	mg/kg	<20	<20	<20	<20	<20
^ Sum of Phenols (non-halogenated)	----	20	mg/kg	<20	<20	<20	<20	<20
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS	SX_OB_20220404_16_12_SS_Primary_ALS	SX_OB_20220404_16_20_SS_Triplicate_ALS
Sampling date / time				04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01	04-Apr-2022 16:12	04-Apr-2022 16:20
Compound	CAS Number	LOR	Unit	EM2206146-001	EM2206146-002	EM2206146-005	EM2206146-006	EM2206146-007
				Result	Result	Result	Result	Result
<b>EP075B: Polynuclear Aromatic Hydrocarbons - Continued</b>								
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>
<b>EP075I: Organochlorine Pesticides</b>								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Endosulfan 1	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan 2	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of organochlorine pesticides	----	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS	SX_OB_20220404_16_12_SS_Primary_ALS	SX_OB_20220404_16_20_SS_Triplicate_ALS
Sampling date / time				04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01	04-Apr-2022 16:12	04-Apr-2022 16:20
Compound	CAS Number	LOR	Unit	EM2206146-001	EM2206146-002	EM2206146-005	EM2206146-006	EM2206146-007
				Result	Result	Result	Result	Result
<b>EP075I: Organochlorine Pesticides - Continued</b>								
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.30	mg/kg	<0.30	<0.30	<0.30	<0.30	<0.30
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	----	20	mg/kg	<20	<20	<20	<20	<20
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C6 - C10 Fraction	C6_C10	20	mg/kg	<20	<20	<20	<20	<20
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	mg/kg	<20	<20	<20	<20	<20
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorodecane sulfonic acid (PFDS)	335-77-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS	SX_OB_20220404_16_12_SS_Primary_ALS	SX_OB_20220404_16_20_SS_Triplicate_ALS
Sampling date / time				04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01	04-Apr-2022 16:12	04-Apr-2022 16:20
Compound	CAS Number	LOR	Unit	EM2206146-001	EM2206146-002	EM2206146-005	EM2206146-006	EM2206146-007
				Result	Result	Result	Result	Result
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	5	µg/kg	<5	<5	<5	<5	<5
Perfluoropentanoic acid (PFPeA)	2706-90-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorohexanoic acid (PFHxA)	307-24-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoroheptanoic acid (PFHpA)	375-85-9	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorooctanoic acid (PFOA)	335-67-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorononanoic acid (PFNA)	375-95-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorodecanoic acid (PFDA)	335-76-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorododecanoic acid (PFDoDA)	307-55-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS	SX_OB_20220404_16_12_SS_Primary_ALS	SX_OB_20220404_16_20_SS_Triplicate_ALS
Sampling date / time				04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01	04-Apr-2022 16:12	04-Apr-2022 16:20
Compound	CAS Number	LOR	Unit	EM2206146-001	EM2206146-002	EM2206146-005	EM2206146-006	EM2206146-007
				Result	Result	Result	Result	Result
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued</b>								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	----	50.0	µg/kg	<50.0	<50.0	<50.0	<50.0	<50.0
Sum of PFHxS and PFOS	355-46-4/1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Sum of PFAS (WA DER List)	----	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
<b>EP066S: PCB Surrogate</b>								
Decachlorobiphenyl	2051-24-3	0.1	%	119	117	118	116	103
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	79.1	87.0	69.8	88.0	86.4
Toluene-D8	2037-26-5	0.1	%	82.3	91.4	70.5	89.1	89.3
4-Bromofluorobenzene	460-00-4	0.1	%	94.2	102	86.5	97.0	100
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>								
Phenol-d6	13127-88-3	0.025	%	105	103	114	109	88.1
2-Chlorophenol-D4	93951-73-6	0.025	%	98.4	96.1	106	102	82.3
2,4,6-Tribromophenol	118-79-6	0.025	%	99.1	97.2	108	104	81.9
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>								
Nitrobenzene-D5	4165-60-0	0.025	%	102	99.2	107	102	81.8
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	94.4	91.7	99.8	95.4	76.8
2-Fluorobiphenyl	321-60-8	0.025	%	110	109	118	115	92.4
Anthracene-d10	1719-06-8	0.025	%	102	99.7	109	105	84.6
4-Terphenyl-d14	1718-51-0	0.025	%	104	112	104	116	88.8
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.0002	%	100	93.2	101	89.8	94.2
13C8-PFOA	----	0.0002	%	108	102	101	104	103



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220404_20_03_SS_Primary_ALS	SX_OB_20220405_00_03_SS_Primary_ALS	SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS
Sampling date / time				04-Apr-2022 20:03	05-Apr-2022 00:03	04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01
Compound	CAS Number	LOR	Unit	EM2206146-008	EM2206146-009	EM2206146-010	EM2206146-011	EM2206146-012
				Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
pH (CaCl <sub>2</sub> )	----	0.1	pH Unit	7.8	7.6	----	----	----
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	26.2	29.2	----	----	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	14	10	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	----	----
Chromium	7440-47-3	5	mg/kg	92	79	----	----	----
Copper	7440-50-8	5	mg/kg	51	47	----	----	----
Lead	7439-92-1	5	mg/kg	<5	<5	----	----	----
Molybdenum	7439-98-7	5	mg/kg	<5	<5	----	----	----
Nickel	7440-02-0	5	mg/kg	166	142	----	----	----
Selenium	7782-49-2	5	mg/kg	<5	<5	----	----	----
Silver	7440-22-4	2	mg/kg	<2	<2	----	----	----
Tin	7440-31-5	10	mg/kg	<10	<10	----	----	----
Zinc	7440-66-6	5	mg/kg	78	70	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>								
Hexavalent Chromium	18540-29-9	1.0	mg/kg	1.2	1.3	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
Total Cyanide	57-12-5	5	mg/kg	<5	<5	----	----	----
<b>EK040T: Fluoride Total</b>								
Fluoride	16984-48-8	100	mg/kg	210	240	----	----	----
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Initial pH	----	0.1	pH Unit	9.6	9.6	----	----	----
After HCl pH	----	0.1	pH Unit	1.4	1.4	----	----	----
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	----	----	----
Final pH	----	0.1	pH Unit	5.0	5.0	----	----	----
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Final pH	----	0.1	pH Unit	----	----	9.5	8.6	9.4
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	----	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220404_20_03_SS_Primary_ALS	SX_OB_20220405_00_03_SS_Primary_ALS	SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS
Sampling date / time				04-Apr-2022 20:03	05-Apr-2022 00:03	04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01
Compound	CAS Number	LOR	Unit	EM2206146-008	EM2206146-009	EM2206146-010	EM2206146-011	EM2206146-012
				Result	Result	Result	Result	Result
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	----	----	----
<b>EP074H: Naphthalene</b>								
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	----	----
<b>EP074I: Volatile Halogenated Compounds</b>								
Vinyl chloride	75-01-4	0.50	mg/kg	<0.50	<0.50	----	----	----
1,1-Dichloroethene	75-35-4	0.50	mg/kg	<0.50	<0.50	----	----	----
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	----	----	----
trans-1,2-Dichloroethene	156-60-5	0.50	mg/kg	<0.50	<0.50	----	----	----
cis-1,2-Dichloroethene	156-59-2	0.50	mg/kg	<0.50	<0.50	----	----	----
Chloroform	67-66-3	0.50	mg/kg	<0.50	<0.50	----	----	----
1,1,1-Trichloroethane	71-55-6	0.50	mg/kg	<0.50	<0.50	----	----	----
Carbon Tetrachloride	56-23-5	0.50	mg/kg	<0.50	<0.50	----	----	----
1,2-Dichloroethane	107-06-2	0.50	mg/kg	<0.50	<0.50	----	----	----
Trichloroethene	79-01-6	0.50	mg/kg	<0.50	<0.50	----	----	----
1,1,2-Trichloroethane	79-00-5	0.50	mg/kg	<0.50	<0.50	----	----	----
Tetrachloroethene	127-18-4	0.50	mg/kg	<0.50	<0.50	----	----	----
1,1,1,2-Tetrachloroethane	630-20-6	0.50	mg/kg	<0.50	<0.50	----	----	----
1,1,2,2-Tetrachloroethane	79-34-5	0.50	mg/kg	<0.50	<0.50	----	----	----
Hexachlorobutadiene	87-68-3	0.50	mg/kg	<0.50	<0.50	----	----	----
Chlorobenzene	108-90-7	0.50	mg/kg	<0.50	<0.50	----	----	----
1,4-Dichlorobenzene	106-46-7	0.50	mg/kg	<0.50	<0.50	----	----	----
1,2-Dichlorobenzene	95-50-1	0.50	mg/kg	<0.50	<0.50	----	----	----
1,2,4-Trichlorobenzene	120-82-1	0.50	mg/kg	<0.50	<0.50	----	----	----
^ Sum of volatile chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	----	----	----
^ Sum of other chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	----	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220404_20_03_SS_Primary_ALS	SX_OB_20220405_00_03_SS_Primary_ALS	SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS
Sampling date / time				04-Apr-2022 20:03	05-Apr-2022 00:03	04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01
Compound	CAS Number	LOR	Unit	EM2206146-008	EM2206146-009	EM2206146-010	EM2206146-011	EM2206146-012
				Result	Result	Result	Result	Result
<b>EP075A: Phenolic Compounds (Halogenated)</b>								
2-Chlorophenol	95-57-8	0.50	mg/kg	<0.50	<0.50	----	----	----
2,4-Dichlorophenol	120-83-2	0.50	mg/kg	<0.50	<0.50	----	----	----
2,6-Dichlorophenol	87-65-0	0.50	mg/kg	<0.50	<0.50	----	----	----
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<1.00	<1.00	----	----	----
2,4,5-Trichlorophenol	95-95-4	1.00	mg/kg	<1.00	<1.00	----	----	----
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<1.00	<1.00	----	----	----
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<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	----	----	----
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	<1.0	----	----	----
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<1.00	<1.00	----	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
Phenol	108-95-2	1	mg/kg	<1	<1	----	----	----
2-Methylphenol	95-48-7	1	mg/kg	<1	<1	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	----	----	----
2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	----	----	----
2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	----	----	----
2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	----	----	----
4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	----	----	----
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	----	----	----
Dinoseb	88-85-7	20	mg/kg	<20	<20	----	----	----
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	20	mg/kg	<20	<20	----	----	----
^ Sum of Phenols (non-halogenated)	----	20	mg/kg	<20	<20	----	----	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	----	----





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220404_20_03_SS_Primary_ALS	SX_OB_20220405_00_03_SS_Primary_ALS	SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS
Sampling date / time				04-Apr-2022 20:03	05-Apr-2022 00:03	04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01
Compound	CAS Number	LOR	Unit	EM2206146-008	EM2206146-009	EM2206146-010	EM2206146-011	EM2206146-012
				Result	Result	Result	Result	Result
<b>EP075B: Polynuclear Aromatic Hydrocarbons - Continued</b>								
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	<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>EP075I: Organochlorine Pesticides</b>								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	----	----	----
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	----	----	----
Endosulfan 1	959-98-8	0.05	mg/kg	<0.05	<0.05	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Endosulfan 2	33213-65-9	0.05	mg/kg	<0.05	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	----	----	----
4.4`-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	----	----	----
Methoxychlor	72-43-5	0.05	mg/kg	<0.05	<0.05	----	----	----
^ Sum of organochlorine pesticides	----	0.10	mg/kg	<0.10	<0.10	----	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220404_20_03_SS_Primary_ALS	SX_OB_20220405_00_03_SS_Primary_ALS	SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS
Sampling date / time				04-Apr-2022 20:03	05-Apr-2022 00:03	04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01
Compound	CAS Number	LOR	Unit	EM2206146-008	EM2206146-009	EM2206146-010	EM2206146-011	EM2206146-012
				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	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	----	----	----
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	----	----	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	----	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	----	20	mg/kg	<20	<20	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	----	----
C6 - C10 Fraction	C6_C10	20	mg/kg	<20	<20	----	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	----
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	----	----	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	mg/kg	<20	<20	----	----	----
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	5.0	µg/kg	<5.0	<5.0	----	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220404_20_03_SS_Primary_ALS	SX_OB_20220405_00_03_SS_Primary_ALS	SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS
Sampling date / time				04-Apr-2022 20:03	05-Apr-2022 00:03	04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01
Compound	CAS Number	LOR	Unit	EM2206146-008	EM2206146-009	EM2206146-010	EM2206146-011	EM2206146-012
				Result	Result	Result	Result	Result
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	5	µg/kg	<5	<5	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	5.0	µg/kg	<5.0	<5.0	----	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	5.0	µg/kg	<5.0	<5.0	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	5.0	µg/kg	<5.0	<5.0	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	5.0	µg/kg	<5.0	<5.0	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	5.0	µg/kg	<5.0	<5.0	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	5.0	µg/kg	<5.0	<5.0	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	10.0	µg/kg	<10.0	<10.0	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	10.0	µg/kg	<10.0	<10.0	----	----	----
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220404_20_03_SS_Primary_ALS	SX_OB_20220405_00_03_SS_Primary_ALS	SX_OB_20220404_08_33_SS_Primary_ALS	SX_OB_20220404_08_34_SS_Duplicate_ALS	SX_OB_20220404_12_01_SS_Primary_ALS
Sampling date / time				04-Apr-2022 20:03	05-Apr-2022 00:03	04-Apr-2022 08:33	04-Apr-2022 08:34	04-Apr-2022 12:01
Compound	CAS Number	LOR	Unit	EM2206146-008	EM2206146-009	EM2206146-010	EM2206146-011	EM2206146-012
				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	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10.0	µg/kg	<10.0	<10.0	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	5.0	µg/kg	<5.0	<5.0	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	5.0	µg/kg	<5.0	<5.0	----	----	----
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	----	50.0	µg/kg	<50.0	<50.0	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	5.0	µg/kg	<5.0	<5.0	----	----	----
Sum of PFAS (WA DER List)	----	10.0	µg/kg	<10.0	<10.0	----	----	----
<b>EP066S: PCB Surrogate</b>								
Decachlorobiphenyl	2051-24-3	0.1	%	119	120	----	----	----
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	84.4	91.7	----	----	----
Toluene-D8	2037-26-5	0.1	%	87.3	96.0	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	97.2	104	----	----	----
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>								
Phenol-d6	13127-88-3	0.025	%	110	117	----	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%	103	108	----	----	----
2,4,6-Tribromophenol	118-79-6	0.025	%	103	110	----	----	----
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>								
Nitrobenzene-D5	4165-60-0	0.025	%	105	108	----	----	----
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	96.6	99.5	----	----	----
2-Fluorobiphenyl	321-60-8	0.025	%	115	120	----	----	----
Anthracene-d10	1719-06-8	0.025	%	105	111	----	----	----
4-Terphenyl-d14	1718-51-0	0.025	%	111	117	----	----	----
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.0002	%	101	98.0	----	----	----
13C8-PFOA	----	0.0002	%	102	105	----	----	----



**Analytical Results**

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220404_16 _12_SS_Primary_ALS	SX_OB_20220404_16 _20_SS_Triplicate_AL S	SX_OB_20220404_20 _03_SS_Primary_ALS	SX_OB_20220405_00 _03_SS_Primary_ALS	----
Sampling date / time				04-Apr-2022 16:12	04-Apr-2022 16:20	04-Apr-2022 20:03	05-Apr-2022 00:03	----
Compound	CAS Number	LOR	Unit	EM2206146-013	EM2206146-014	EM2206146-015	EM2206146-016	-----
				Result	Result	Result	Result	----
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Final pH	----	0.1	pH Unit	9.5	9.4	9.5	9.1	----



## 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

## QUALITY CONTROL REPORT

<b>Work Order</b>	: <b>EM2206146</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>	: 05-Apr-2022
<b>Order number</b>	: ----	<b>Date Analysis Commenced</b>	: 06-Apr-2022
<b>C-O-C number</b>	: 20220405044120-ALS-14	<b>Issue Date</b>	: 12-Apr-2022
<b>Sampler</b>	: Brandon - Agon, Emma. S - EP Risk		
<b>Site</b>	: 20220405044120-ALS-14		
<b>Quote number</b>	: EN/150/19 -WGTP -Bulk Sample Quote		
<b>No. of samples received</b>	: 16		
<b>No. of samples analysed</b>	: 14		



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

This Quality Control Report contains the following information:

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

### Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC



## General Comments

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

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

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

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

## Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4274088)</b>									
EM2206136-009	Anonymous	EG005T: Chromium	7440-47-3	2	mg/kg	34	30	10.5	0% - 50%
EM2206136-009	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	50	61	20.0	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	18	21	17.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	21	30	34.7	No Limit
EM2206146-009	SX_OB_20220405_00_03_ 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	79	79	0.0	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	142	151	5.9	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	10	13	20.8	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	47	51	9.0	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	70	71	0.0	0% - 50%		

**EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4277285)**



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 Work Order : EM2206146  
 Client : AGON ENVIRONMENTAL PTY LTD  
 Project : JC0927



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: 4277285) - continued</b>									
EM2206035-001	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.7	7.9	1.9	0% - 20%
EM2206131-001	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	5.4	5.2	1.9	0% - 20%
<b>EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4277286)</b>									
EM2206146-007	SX_OB_20220404_16_20_ SS_Triplicate_ALS	EA001: pH (CaCl2)	----	0.1	pH Unit	7.7	7.8	0.0	0% - 20%
EM2206329-016	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.6	7.6	0.0	0% - 20%
<b>EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4279077)</b>									
EM2205832-001	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	6.9	7.0	2.0	0% - 20%
EM2206168-010	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.6	7.6	0.0	0% - 20%
<b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4276046)</b>									
EM2206136-003	Anonymous	EA055: Moisture Content	----	0.1	%	9.3	8.8	5.5	0% - 20%
EM2206146-005	SX_OB_20220404_12_01_ SS_Primary_ALS	EA055: Moisture Content	----	0.1	%	30.9	31.3	1.3	0% - 20%
<b>EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4274089)</b>									
EM2206136-009	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2206146-009	SX_OB_20220405_00_03_ 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: 4276020)</b>									
EM2206064-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
EM2206135-002	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: 4276021)</b>									
EM2206146-008	SX_OB_20220404_20_03_ SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	1.2	1.1	0.0	No Limit
EM2206168-010	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	1.2	1.8	36.2	No Limit
<b>EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4276086)</b>									
EM2206136-006	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EM2206167-054	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	3	4	0.0	No Limit
<b>EK040T: Fluoride Total (QC Lot: 4276028)</b>									
EM2206136-007	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	140	190	28.5	No Limit
EM2206168-002	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	190	230	14.9	No Limit
<b>EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4273861)</b>									
EM2206146-001	SX_OB_20220404_08_33_ SS_Primary_ALS	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2206168-006	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4270289)</b>									
EM2206146-001	SX_OB_20220404_08_33_ 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



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>EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4270289) - continued</b>									
EM2206146-001	SX_OB_20220404_08_33_ SS_Primary_ALS	EP074-UT: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
<b>EP074H: Naphthalene (QC Lot: 4270289)</b>									
EM2206146-001	SX_OB_20220404_08_33_ 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: 4270289)</b>									
EM2206146-001	SX_OB_20220404_08_33_ 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: 4273863)</b>									
EM2206146-001	SX_OB_20220404_08_33_ 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



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: 4273863) - continued</b>									
EM2206168-006	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit
<b>EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4273863)</b>									
EM2206146-001	SX_OB_20220404_08_33_ 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
EM2206168-006	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	<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: 4273863)</b>									
EM2206146-001	SX_OB_20220404_08_33_ 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



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: 4273863) - continued</b>									
EM2206146-001	SX_OB_20220404_08_33_ SS_Primary_ALS	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
EM2206168-006	Anonymous	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	<1.0	0.0	No Limit
<b>EP075I: Organochlorine Pesticides (QC Lot: 4273863)</b>									
EM2206146-001	SX_OB_20220404_08_33_ SS_Primary_ALS	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit



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: 4273863) - continued</b>									
EM2206146-001	SX_OB_20220404_08_33_ SS_Primary_ALS	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
EM2206168-006	Anonymous	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
<b>EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4270289)</b>									
EM2206146-001	SX_OB_20220404_08_33_ 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: 4273862)</b>									
EM2206146-001	SX_OB_20220404_08_33_ 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
EM2206168-006	Anonymous	EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4273862) - continued</b>									
EM2206168-006	Anonymous	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: 4270289)</b>									
EM2206146-001	SX_OB_20220404_08_33_ 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: 4273862)</b>									
EM2206146-001	SX_OB_20220404_08_33_ 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
EM2206168-006	Anonymous	EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4274434)</b>									
EM2205700-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0006	0.0006	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2206146-008	SX_OB_20220404_20_03_ 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
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4274434)</b>									
EM2205700-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



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: 4274434) - continued</b>									
EM2205700-001	Anonymous	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
EM2206146-008	SX_OB_20220404_20_03_SS_Primary_ALS	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<5 µg/kg	<0.005	0.0	No Limit		
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4274434)</b>									
EM2205700-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2206146-008	SX_OB_20220404_20_03_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



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: 4274434) - continued</b>									
EM2206146-008	SX_OB_20220404_20_03_SS_Primary_ALS	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: 4274434)</b>									
EM2205700-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		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
EM2206146-008	SX_OB_20220404_20_03_SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
<b>EP231P: PFAS Sums (QC Lot: 4274434)</b>									
EM2205700-001	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0006	0.0006	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0006	0.0006	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0006	0.0006	0.0	No Limit
EM2206146-008	SX_OB_20220404_20_03_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: 4278168)</b>									
EM2206146-001	SX_OB_20220404_08_33_SS_Primary_ALS	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2206168-006	Anonymous	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>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4278168) - continued</b>									
EM2206168-006	Anonymous	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: 4278246)</b>									
EM2206146-010	SX_OB_20220404_08_33_ SS_Primary_ALS	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2206168-014	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4278168)</b>									
EM2206146-001	SX_OB_20220404_08_33_ SS_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EM2206168-006	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



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: 4278168) - continued</b>									
EM2206168-006	Anonymous	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: 4278246)</b>									
EM2206146-010	SX_OB_20220404_08_33_ SS_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EM2206168-014	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
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4278168)</b>									
EM2206146-001	SX_OB_20220404_08_33_ SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit



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: 4278168) - continued</b>									
EM2206146-001	SX_OB_20220404_08_33_ SS_Primary_ALS	EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2206168-006	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: 4278246)</b>									
EM2206146-010	SX_OB_20220404_08_33_ SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2206168-014	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



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: 4278246) - continued</b>									
EM2206168-014	Anonymous	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: 4278168)</b>									
EM2206146-001	SX_OB_20220404_08_33_SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2206168-006	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: 4278246)</b>									
EM2206146-010	SX_OB_20220404_08_33_SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2206168-014	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: 4278168)</b>									
EM2206146-001	SX_OB_20220404_08_33_SS_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP231P: PFAS Sums (QC Lot: 4278168) - continued</b>									
EM2206146-001	SX_OB_20220404_08_33_ SS_Primary_ALS	EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2206168-006	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: 4278246)</b>									
EM2206146-010	SX_OB_20220404_08_33_ SS_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763- 23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2206168-014	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 (%) LCS	Acceptable Limits (%) Low High	
<b>EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4274088)</b>								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	103	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	60.6	50.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	105	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	95.1	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	87.7	70.0	130
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	99.8	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	100	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	71.7	70.0	130
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	87.0	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	75.2	70.0	130
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4276229)</b>								
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.3	----	----	----	----
<b>EA001: pH in soil using 0.01M CaCl extract (QCLot: 4277285)</b>								
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	101	98.8	101
					7 pH Unit	101	99.3	101
<b>EA001: pH in soil using 0.01M CaCl extract (QCLot: 4277286)</b>								
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	100	98.8	101
					7 pH Unit	100	99.3	101
<b>EA001: pH in soil using 0.01M CaCl extract (QCLot: 4279077)</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: 4274089)</b>								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	96.9	70.0	130
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4276020)</b>								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	79.2	70.0	130
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4276021)</b>								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	82.1	70.0	130
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4276086)</b>								
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	102	70.0	130
<b>EK040T: Fluoride Total (QCLot: 4276028)</b>								
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	83.3	75.2	110
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4273861)</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>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4273861) - continued</b>									
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	124	67.4	136	
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4270289)</b>									
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	98.1	69.2	116	
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	93.3	67.7	116	
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	91.6	66.6	115	
EP074-UT: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	4.2 mg/kg	88.2	65.2	112	
	106-42-3								
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	91.2	69.4	111	
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	89.1	68.4	110	
<b>EP074H: Naphthalene (QCLot: 4270289)</b>									
EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	0.6 mg/kg	88.1	72.3	114	
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4270289)</b>									
EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	129	47.0	138	
EP074-UT: 1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	104	57.6	125	
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	98.1	72.3	115	
EP074-UT: trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	102	60.5	122	
EP074-UT: cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	98.9	70.3	112	
EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	98.0	66.6	115	
EP074-UT: 1,1,1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	97.6	64.4	122	
EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	98.4	58.4	127	
EP074-UT: 1,2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	110	72.9	114	
EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	95.5	64.7	115	
EP074-UT: 1,1,2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	98.6	72.6	116	
EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	94.2	60.0	119	
EP074-UT: 1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	100	71.8	116	
EP074-UT: 1,1,2,2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	90.7	66.1	116	
EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	88.6	39.8	128	
EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	94.4	70.3	113	
EP074-UT: 1,4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	91.7	62.6	113	
EP074-UT: 1,2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	94.4	70.8	110	
EP074-UT: 1,2,4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	86.1	48.4	120	
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4273863)</b>									
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	104	74.5	126	
EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	106	72.7	126	
EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	101	73.5	132	
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	102	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	107	72.4	128	



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4273863) - continued</b>									
EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	95.9	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	110	71.9	128	
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	96.0	54.4	135	
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4273863)</b>									
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	105	71.5	130	
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	100	73.4	129	
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	101	74.3	129	
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	106	70.9	133	
EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	107	71.8	132	
EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	84.2	41.0	156	
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	109	65.3	134	
EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	98.2	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	101	62.0	128	
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	87.4	34.5	137	
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4273863)</b>									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	103	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	103	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	102	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	103	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	105	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	104	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	106	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	106	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	103	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	104	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	112	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	103	65.1	130	
EP075-EM: Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	111	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	110	72.9	135	
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	106	71.3	134	
<b>EP075I: Organochlorine Pesticides (QCLot: 4273863)</b>									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	111	71.0	129	
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	110	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	105	70.8	130	
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	107	76.5	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: 4273863) - continued</b>									
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	104	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	104	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	105	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	104	75.3	131	
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	107	69.4	134	
EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	103	71.0	132	
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	103	78.0	133	
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	101	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	111	71.4	135	
EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	103	74.8	134	
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	103	70.2	135	
EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	102	77.7	133	
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	104	63.6	135	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4270289)</b>									
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	96.5	61.1	119	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4273862)</b>									
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	760 mg/kg	106	74.4	129	
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	3270 mg/kg	102	81.0	123	
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1550 mg/kg	99.4	81.8	121	
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	102	70.0	130	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4270289)</b>									
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	95.3	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: 4273862)</b>									
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1110 mg/kg	127	75.4	132	
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	4180 mg/kg	96.0	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	290 mg/kg	98.6	73.3	136	
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	102	70.0	130	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4274434)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	91.0	72.0	128	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	92.5	73.0	123	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	79.1	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	102	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	89.5	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	100	59.0	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>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4274434)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	92.9	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.7	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.1	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.2	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.0	69.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.8	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.2	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.2	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.4	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	86.8	69.0	133	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4274434)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.1	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	96.0	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	97.8	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	88.9	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	97.1	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.4	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	61.0	139	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4274434)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	99.7	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	101	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	107	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	87.2	70.0	130	
<b>EP231P: PFAS Sums (QCLot: 4274434)</b>									
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----	
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----	
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----	

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4278168)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	95.9	72.0	130	



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4278168) - continued</b>									
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	110	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	107	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	106	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	98.1	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	96.6	53.0	142	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4278246)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	105	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	97.5	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	96.4	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	101	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	100	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	99.4	53.0	142	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4278168)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	99.4	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	99.9	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	95.8	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	99.8	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	102	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	91.1	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.7	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	108	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	103	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	94.7	71.0	132	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4278246)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	91.1	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	93.2	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	93.6	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	94.9	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	93.0	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	95.3	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	91.9	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	86.9	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	88.0	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	94.2	71.0	132	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4278168)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	105	67.0	137	



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: 4278168) - continued</b>								
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	95.9	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	96.6	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	97.1	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	96.0	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	112	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	106	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4278246)</b>								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	101	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	90.4	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	92.2	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	92.2	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	96.9	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	98.2	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	94.7	61.0	135
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4278168)</b>								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	101	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	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	118	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	81.4	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4278246)</b>								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	92.0	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	102	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	114	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	79.7	70.0	130
<b>EP231P: PFAS Sums (QCLot: 4278168)</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: 4278246)</b>								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
						LCS	Low	High
<b>EP231P: PFAS Sums (QCLot: 4278246) - continued</b>								
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

### 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(%)	Acceptable Limits (%)	
					MS	Low	High
<b>EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4274088)</b>							
EM2206136-011	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	96.6	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	94.2	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	84.0	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	97.6	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	92.3	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	# Not Determined	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	87.3	80.0	120
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4274089)</b>							
EM2206136-011	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	102	76.0	116
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4276020)</b>							
EM2206064-003	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	86.4	58.0	114
EM2206064-003	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	93.5	58.0	114
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4276021)</b>							
EM2206146-009	SX_OB_20220405_00_03_SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	62.3	58.0	114
EM2206146-009	SX_OB_20220405_00_03_SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	86.3	58.0	114
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4276086)</b>							
EM2206136-007	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	84.6	70.0	130
<b>EK040T: Fluoride Total (QCLot: 4276028)</b>							
EM2206146-001	SX_OB_20220404_08_33_SS_Primary_ALS	EK040T: Fluoride	16984-48-8	400 mg/kg	73.0	70.0	130
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4273861)</b>							
EM2206146-005	SX_OB_20220404_12_01_SS_Primary_ALS	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	130	59.6	152
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4270289)</b>							
EM2206146-002	SX_OB_20220404_08_34_SS_Duplicate_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	89.0	53.7	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>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4270289) - continued</b>							
EM2206146-002	SX_OB_20220404_08_34_SS_Duplicate_ALS	EP074-UT: Toluene	108-88-3	2 mg/kg	88.6	55.1	124
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4270289)</b>							
EM2206146-002	SX_OB_20220404_08_34_SS_Duplicate_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	79.3	38.4	145
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	80.5	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	85.1	55.5	122
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4273863)</b>							
EM2206146-002	SX_OB_20220404_08_34_SS_Duplicate_ALS	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	111	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	108	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	94.9	10.0	144
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4273863)</b>							
EM2206146-002	SX_OB_20220404_08_34_SS_Duplicate_ALS	EP075-EM: Phenol	108-95-2	3 mg/kg	110	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	110	34.2	129
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4273863)</b>							
EM2206146-002	SX_OB_20220404_08_34_SS_Duplicate_ALS	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	102	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	107	37.8	152
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4270289)</b>							
EM2206146-002	SX_OB_20220404_08_34_SS_Duplicate_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	64.2	42.3	111
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4273862)</b>							
EM2206146-006	SX_OB_20220404_16_12_SS_Primary_ALS	EP071-EM: C10 - C14 Fraction	----	760 mg/kg	104	71.3	126
		EP071-EM: C15 - C28 Fraction	----	3270 mg/kg	100.0	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1550 mg/kg	97.1	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	5580 mg/kg	98.9	70.0	130
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4270289)</b>							
EM2206146-002	SX_OB_20220404_08_34_SS_Duplicate_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	61.8	39.9	109
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4273862)</b>							
EM2206146-006	SX_OB_20220404_16_12_SS_Primary_ALS	EP071-EM: >C10 - C16 Fraction	----	1110 mg/kg	124	71.5	130
		EP071-EM: >C16 - C34 Fraction	----	4180 mg/kg	93.7	76.9	119
		EP071-EM: >C34 - C40 Fraction	----	290 mg/kg	102	65.3	139
		EP071-EM: >C10 - C40 Fraction (sum)	----	5580 mg/kg	98.9	70.0	130
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4274434)</b>							
EM2205700-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	106	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	93.0	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	96.1	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	92.3	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	83.0	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	93.7	59.0	134



Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4274434)</b>							
EM2205700-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	92.9	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	86.6	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	102	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	90.9	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	92.4	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	92.8	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	121	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	93.4	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	90.4	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	87.2	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	92.6	69.0	133
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4274434)</b>							
EM2205700-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	87.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	107	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	106	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	92.7	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	101	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	95.8	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: 4274434)</b>							
EM2205700-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	90.6	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	102	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	112	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	72.3	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: 4278168)</b>							
EM2206168-007	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	103	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	102	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	104	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	103	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	95.1	65.0	140



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: 4278168) - continued</b>							
EM2206168-007	Anonymous	EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	99.5	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4278246)</b>							
EM2206146-011	SX_OB_20220404_08_34_SS_Duplicate_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	102	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	82.9	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	86.8	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	87.0	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	89.5	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	97.3	53.0	142
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4278168)</b>							
EM2206168-007	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	92.4	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	102	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	95.3	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	102	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	101	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	104	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	84.8	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	95.9	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	109	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	102	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	93.8	71.0	132
		<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4278246)</b>					
EM2206146-011	SX_OB_20220404_08_34_SS_Duplicate_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	81.9	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	90.3	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	95.8	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	93.8	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	91.7	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	89.7	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	100	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	87.3	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	88.6	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	74.6	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	83.2	71.0	132
		<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4278168)</b>					
EM2206168-007	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	107	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	108	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	99.9	70.0	130





Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4278168) - continued</b>							
EM2206168-007	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	95.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	101	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	116	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	106	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4278246)</b>							
EM2206146-011	SX_OB_20220404_08_34_SS_Duplicate_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	96.8	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	85.0	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	70.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	84.1	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	82.2	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	86.1	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	94.1	61.0	135
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4278168)</b>							
EM2206168-007	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	98.9	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	111	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	121	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	73.6	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4278246)</b>							
EM2206146-011	SX_OB_20220404_08_34_SS_Duplicate_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	92.6	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	103	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	94.7	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	71.3	70.0	130

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

Work Order	: EM2206146	Page	: 1 of 13
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: Craig Trimbur	Telephone	: +61-3-8549 9600
Project	: JC0927	Date Samples Received	: 05-Apr-2022
Site	: 20220405044120-ALS-14	Issue Date	: 12-Apr-2022
Sampler	: Brandon - Agon, Emma. S - EP Risk	No. of samples received	: 16
Order number	: ----	No. of samples analysed	: 14

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

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

### Summary of Outliers

#### Outliers : Quality Control Samples

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

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

#### Outliers : Analysis Holding Time Compliance

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

#### Outliers : Frequency of Quality Control Samples

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



### Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: SOIL

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
<b>Matrix Spike (MS) Recoveries</b>							
EG005(ED093)T: Total Metals by ICP-AES	EM2206136--011	Anonymous	Nickel	7440-02-0	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

### Analysis Holding Time Compliance

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

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

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

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

Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
<b>Soil Glass Jar - Unpreserved (EA001)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	11-Apr-2022	11-Apr-2022	✓	11-Apr-2022	11-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EA001)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	11-Apr-2022	12-Apr-2022	✓	11-Apr-2022	11-Apr-2022	✓
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
<b>Soil Glass Jar - Unpreserved (EA055)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	----	----	----	08-Apr-2022	18-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EA055)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	----	----	----	08-Apr-2022	19-Apr-2022	✓
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
<b>Soil Glass Jar - Unpreserved (EG005T)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	08-Apr-2022	01-Oct-2022	✓	09-Apr-2022	01-Oct-2022	✓
<b>Soil Glass Jar - Unpreserved (EG005T)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	08-Apr-2022	02-Oct-2022	✓	09-Apr-2022	02-Oct-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>EG035T: Total Recoverable Mercury by FIMS</b>								
<b>Soil Glass Jar - Unpreserved (EG035T)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	08-Apr-2022	02-May-2022	✓	09-Apr-2022	02-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EG035T)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	08-Apr-2022	03-May-2022	✓	09-Apr-2022	03-May-2022	✓
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>								
<b>Soil Glass Jar - Unpreserved (EG048G)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	08-Apr-2022	02-May-2022	✓	09-Apr-2022	15-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EG048G)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	08-Apr-2022	03-May-2022	✓	09-Apr-2022	15-Apr-2022	✓
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
<b>Soil Glass Jar - Unpreserved (EK026SF)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	08-Apr-2022	18-Apr-2022	✓	09-Apr-2022	22-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EK026SF)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	08-Apr-2022	19-Apr-2022	✓	09-Apr-2022	22-Apr-2022	✓
<b>EK040T: Fluoride Total</b>								
<b>Soil Glass Jar - Unpreserved (EK040T)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	08-Apr-2022	02-May-2022	✓	12-Apr-2022	02-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EK040T)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	08-Apr-2022	03-May-2022	✓	12-Apr-2022	03-May-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_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	08-Apr-2022	01-Oct-2022	✓	----	----	----
<b>Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	08-Apr-2022	02-Oct-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_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	08-Apr-2022	01-Oct-2022	✓	----	----	----
<b>Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	08-Apr-2022	02-Oct-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>EP066: Polychlorinated Biphenyls (PCB)</b>								
<b>Soil Glass Jar - Unpreserved (EP066-EM)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	08-Apr-2022	18-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP066-EM)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	08-Apr-2022	19-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	06-Apr-2022	11-Apr-2022	✓	07-Apr-2022	11-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	06-Apr-2022	12-Apr-2022	✓	07-Apr-2022	12-Apr-2022	✓
<b>EP074H: Naphthalene</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	06-Apr-2022	11-Apr-2022	✓	07-Apr-2022	11-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	06-Apr-2022	12-Apr-2022	✓	07-Apr-2022	12-Apr-2022	✓
<b>EP074I: Volatile Halogenated Compounds</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	06-Apr-2022	11-Apr-2022	✓	07-Apr-2022	11-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	06-Apr-2022	12-Apr-2022	✓	07-Apr-2022	12-Apr-2022	✓
<b>EP075A: Phenolic Compounds (Halogenated)</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	08-Apr-2022	18-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	08-Apr-2022	19-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	08-Apr-2022	18-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	08-Apr-2022	19-Apr-2022	✓	08-Apr-2022	18-May-2022	✓



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	08-Apr-2022	18-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	08-Apr-2022	19-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>EP075I: Organochlorine Pesticides</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	08-Apr-2022	18-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	08-Apr-2022	19-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	06-Apr-2022	11-Apr-2022	✓	07-Apr-2022	11-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	08-Apr-2022	18-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	06-Apr-2022	12-Apr-2022	✓	07-Apr-2022	12-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	08-Apr-2022	19-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	06-Apr-2022	11-Apr-2022	✓	07-Apr-2022	11-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	08-Apr-2022	18-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	06-Apr-2022	12-Apr-2022	✓	07-Apr-2022	12-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	08-Apr-2022	19-Apr-2022	✓	08-Apr-2022	18-May-2022	✓



Matrix: **SOIL**

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	07-Apr-2022	01-Oct-2022	✓	11-Apr-2022	17-May-2022	✓
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	07-Apr-2022	02-Oct-2022	✓	11-Apr-2022	17-May-2022	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	07-Apr-2022	01-Oct-2022	✓	11-Apr-2022	17-May-2022	✓
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	07-Apr-2022	02-Oct-2022	✓	11-Apr-2022	17-May-2022	✓
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	07-Apr-2022	01-Oct-2022	✓	11-Apr-2022	17-May-2022	✓
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	07-Apr-2022	02-Oct-2022	✓	11-Apr-2022	17-May-2022	✓
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	07-Apr-2022	01-Oct-2022	✓	11-Apr-2022	17-May-2022	✓
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	07-Apr-2022	02-Oct-2022	✓	11-Apr-2022	17-May-2022	✓
<b>EP231P: PFAS Sums</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS	04-Apr-2022	07-Apr-2022	01-Oct-2022	✓	11-Apr-2022	17-May-2022	✓
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220405_00_03_SS_Primary_ALS		05-Apr-2022	07-Apr-2022	02-Oct-2022	✓	11-Apr-2022	17-May-2022	✓

Matrix: **WATER**

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

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



Matrix: WATER

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
<b>HDPE (no PTFE) (EP231X)</b>								
SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS, SX_OB_20220405_00_03_SS_Primary_ALS, SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS, SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS, SX_OB_20220405_00_03_SS_Primary_ALS	08-Apr-2022	09-Apr-2022	05-Oct-2022	✓	09-Apr-2022	05-Oct-2022	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>HDPE (no PTFE) (EP231X)</b>								
SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS, SX_OB_20220405_00_03_SS_Primary_ALS, SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS, SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS, SX_OB_20220405_00_03_SS_Primary_ALS	08-Apr-2022	09-Apr-2022	05-Oct-2022	✓	09-Apr-2022	05-Oct-2022	✓
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
<b>HDPE (no PTFE) (EP231X)</b>								
SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS, SX_OB_20220405_00_03_SS_Primary_ALS, SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS, SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS, SX_OB_20220405_00_03_SS_Primary_ALS	08-Apr-2022	09-Apr-2022	05-Oct-2022	✓	09-Apr-2022	05-Oct-2022	✓
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
<b>HDPE (no PTFE) (EP231X)</b>								
SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS, SX_OB_20220405_00_03_SS_Primary_ALS, SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS, SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS, SX_OB_20220405_00_03_SS_Primary_ALS	08-Apr-2022	09-Apr-2022	05-Oct-2022	✓	09-Apr-2022	05-Oct-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>EP231P: PFAS Sums</b>									
<b>HDPE (no PTFE) (EP231X)</b>									
SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS, SX_OB_20220405_00_03_SS_Primary_ALS, SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS,	SX_OB_20220404_08_34_SS_Duplicate_ALS, SX_OB_20220404_16_12_SS_Primary_ALS, SX_OB_20220404_20_03_SS_Primary_ALS, SX_OB_20220404_08_33_SS_Primary_ALS, SX_OB_20220404_12_01_SS_Primary_ALS, SX_OB_20220404_16_20_SS_Triplicate_ALS, SX_OB_20220405_00_03_SS_Primary_ALS	<b>08-Apr-2022</b>	<b>09-Apr-2022</b>	05-Oct-2022	✓	<b>09-Apr-2022</b>	05-Oct-2022	✓	



## Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Reaular	Actual	Expected	Evaluation	
<b>Laboratory Duplicates (DUP)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	4	30	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	6	53	11.32	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	2	15	13.33	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	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	7	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	4	30	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	6	53	11.32	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	15	6.67	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	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	7	14.29	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	30	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	15	6.67	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	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	7	14.29	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	30	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	15	6.67	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	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	7	14.29	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	30	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	30	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	30	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	30	6.67	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.

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Work Order : EM2206146  
Client : AGON ENVIRONMENTAL PTY LTD  
Project : JC0927



<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.

# CHAIN OF CUSTODY DOCUMENTATION

CLIENT: Agon Environmental  
 ADDRESS / OFFICE: Melbourne  
 PROJECT MANAGER (PM): Craig Trimbur  
 PROJECT ID: JC0927

SAMPLER: Emma.S - EP Risk LR - EP Risk  
 MOBILE 1: +61 400 826 907 (Craig Trimbur)  
 MOBILE 2: +61 490 411 004 (David Lawson)  
 EMAIL REPORT TO: Labreports.TST@agonenviro.com.au  
 motherhublabresults1@wgtp.com.au



Australian Laboratory Services Pty Ltd

SITE: 20220406042745-ALS-21

RESULTS REQUIRED (Date): 5 days

P.O. NO.:  
 QUOTE NO.: ME-150-19 WGTP

EMAIL INVOICE TO: (if different to report) Labreports.TST@agonenviro.com.au agonenvironmental@esdat.com.au

ANALYSIS REQUIRED INCLUDING SUITES (note - suite codes must be listed to attract suite prices)

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

ALS ID	SAMPLE ID	MATRIX	DATE	Time	CONTAINER INFORMATION		Total bottles	Spot Sample Prep	P16 plus Cr	FAS 28 Extended suite	ASLP FAS - Extended Suite (Lab to determine pH)	DI Leachate PFAS - Extended Suite	Notes:
					Type / Code								
1,11	SX_OB_20220405_08_22_SS_Primary_ALS	S	5/04/2022	08:22	Bucket		1	X	X	X	X		
2,12	SX_OB_20220405_08_23_SS_Duplicate_ALS	S	5/04/2022	08:23	Bucket		1	X	X	X	X		
3	SX_OB_20220405_08_32_SR_Rinsate_ALS	W	5/04/2022	08:32	Bottle		1						
4	SX_OB_20220405_08_33_SB_Blank_ALS	W	5/04/2022	08:33	Bottle		1						
5,15	SX_OB_20220405_12_23_SS_Primary_ALS	S	5/04/2022	12:23	Bucket		1	X	X	X	X		
6,14	SX_OB_20220405_16_05_SS_Primary_ALS	S	5/04/2022	16:05	Bucket		1	X	X	X	X		
7,15	SX_OB_20220405_16_14_SS_Triplicate_ALS	S	5/04/2022	16:14	Bucket		1	X	X	X	X		
8,16	SX_OB_20220405_20_06_SS_Primary_ALS	S	5/04/2022	20:06	Bucket		1	X	X	X	X		
9,17	SX_OB_20220405_00_11_SS_Primary_ALS	S	6/04/2022	00:11	Bucket		1	X	X	X	X		
10,18	SX_OB_20220406_04_10_SS_Primary_ALS	S	6/04/2022	04:10	Bucket		1	X	X	X	X		

RELINQUISHED BY:

RECEIVED BY:

Name: *Pravin* Date: *6/4* METHOD OF SHIPMENT  
 Of: *M* Time: *11:22* Con' Note No:  
 Name: \_\_\_\_\_ Date: \_\_\_\_\_ Transport Co:  
 Of: \_\_\_\_\_ Time: \_\_\_\_\_

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cr 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 = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;  
 Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

Environmental Division  
 Melbourne  
 Work Order Reference  
**EM2206168**



Telephone : + 61-3-8649 9800

## AUSTRALIAN LABORATORY SERVICES P/L

## CERTIFICATE OF ANALYSIS

**Work Order** : **EM2206168**  
**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** : 20220406042745-ALS-21  
**Sampler** : Emma. S - EP Risk LR - EP Risk  
**Site** :  
**Quote number** : EN/150/19 -WGTP -Bulk Sample Quote  
**No. of samples received** : 18  
**No. of samples analysed** : 18

**Page** : 1 of 29  
**Laboratory** : Environmental Division Melbourne  
**Contact** : Josh Alexander  
**Address** : 4 Westall Rd Springvale VIC Australia 3171  
  
**Telephone** : +61-3-8549 9600  
**Date Samples Received** : 06-Apr-2022 11:25  
**Date Analysis Commenced** : 07-Apr-2022  
**Issue Date** : 12-Apr-2022 17:16



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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

### *Signatories*

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	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 Organics, Springvale, VIC





## General Comments

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

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP074-UT: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074-WF: Where reported, Sum of trichlorobenzenes is the sum of the reported concentrations of 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene, and 1,3,5-Trichlorobenzene at or above the LOR.
- 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_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS	SX_OB_20220405_12_23_SS_Primary_ALS	SX_OB_20220405_16_05_SS_Primary_ALS	SX_OB_20220405_16_14_SS_Triplicate_ALS
Sampling date / time				05-Apr-2022 08:22	05-Apr-2022 08:23	05-Apr-2022 12:23	05-Apr-2022 16:05	05-Apr-2022 16:04
Compound	CAS Number	LOR	Unit	EM2206168-001	EM2206168-002	EM2206168-005	EM2206168-006	EM2206168-007
				Result	Result	Result	Result	Result
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05



## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS	SX_OB_20220405_12_23_SS_Primary_ALS	SX_OB_20220405_16_05_SS_Primary_ALS	SX_OB_20220405_16_14_SS_Triplicate_ALS
Sampling date / time				05-Apr-2022 08:22	05-Apr-2022 08:23	05-Apr-2022 12:23	05-Apr-2022 16:05	05-Apr-2022 16:04
Compound	CAS Number	LOR	Unit	EM2206168-001	EM2206168-002	EM2206168-005	EM2206168-006	EM2206168-007
				Result	Result	Result	Result	Result
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	91.8	97.2	95.0	99.3	94.2
13C8-PFOA	----	0.02	%	102	101	103	104	103



## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220405_20_06_SS_Primary_ALS	SX_OB_20220406_00_11_SS_Primary_ALS	SX_OB_20220406_04_10_SS_Primary_ALS	----	----
Sampling date / time				05-Apr-2022 20:06	05-Apr-2022 00:11	05-Apr-2022 04:10	----	----
Compound	CAS Number	LOR	Unit	EM2206168-008	EM2206168-009	EM2206168-010	-----	-----
				Result	Result	Result	----	----
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----



## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220405_20_06_SS_Primary_ALS	SX_OB_20220406_00_11_SS_Primary_ALS	SX_OB_20220406_04_10_SS_Primary_ALS	----	----
Sampling date / time				05-Apr-2022 20:06	05-Apr-2022 00:11	05-Apr-2022 04:10	----	----
Compound	CAS Number	LOR	Unit	EM2206168-008	EM2206168-009	EM2206168-010	-----	-----
				Result	Result	Result	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	----	----
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	----	----
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	----	----
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	<b>94.4</b>	<b>91.3</b>	<b>95.4</b>	----	----
13C8-PFOA	----	0.02	%	<b>100</b>	<b>99.7</b>	<b>106</b>	----	----



## Analytical Results

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

Sample ID

				SX_OB_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS	SX_OB_20220405_12_23_SS_Primary_ALS	SX_OB_20220405_16_05_SS_Primary_ALS	SX_OB_20220405_16_14_SS_Triplicate_ALS
Sampling date / time				05-Apr-2022 08:22	05-Apr-2022 08:23	05-Apr-2022 12:23	05-Apr-2022 16:05	05-Apr-2022 16:14
Compound	CAS Number	LOR	Unit	EM2206168-011	EM2206168-012	EM2206168-013	EM2206168-014	EM2206168-015
				Result	Result	Result	Result	Result
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05



## Analytical Results

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

Sample ID

				SX_OB_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS	SX_OB_20220405_12_23_SS_Primary_ALS	SX_OB_20220405_16_05_SS_Primary_ALS	SX_OB_20220405_16_14_SS_Triplicate_ALS
Sampling date / time				05-Apr-2022 08:22	05-Apr-2022 08:23	05-Apr-2022 12:23	05-Apr-2022 16:05	05-Apr-2022 16:14
Compound	CAS Number	LOR	Unit	EM2206168-011	EM2206168-012	EM2206168-013	EM2206168-014	EM2206168-015
				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	%	101	95.4	94.4	94.8	103
13C8-PFOA	----	0.02	%	104	102	100	97.6	102



## Analytical Results

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

Sample ID

				SX_OB_20220405_20_06_SS_Primary_ALS	SX_OB_20220406_00_11_SS_Primary_ALS	SX_OB_20220406_04_10_SS_Primary_ALS	----	----
Sampling date / time				05-Apr-2022 20:06	05-Apr-2022 00:11	05-Apr-2022 04:10	----	----
Compound	CAS Number	LOR	Unit	EM2206168-016	EM2206168-017	EM2206168-018	-----	-----
				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 (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----





## Analytical Results

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

Sample ID

				SX_OB_20220405_20_06_SS_Primary_ALS	SX_OB_20220406_00_11_SS_Primary_ALS	SX_OB_20220406_04_10_SS_Primary_ALS	----	----
Sampling date / time				05-Apr-2022 20:06	05-Apr-2022 00:11	05-Apr-2022 04:10	----	----
Compound	CAS Number	LOR	Unit	EM2206168-016	EM2206168-017	EM2206168-018	-----	-----
				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	%	87.1	97.8	95.6	----	----
13C8-PFOA	----	0.02	%	96.3	99.8	103	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS	SX_OB_20220405_12_23_SS_Primary_ALS	SX_OB_20220405_16_05_SS_Primary_ALS	SX_OB_20220405_16_04_SS_Triplicate_ALS
Sampling date / time				05-Apr-2022 08:22	05-Apr-2022 08:23	05-Apr-2022 12:23	05-Apr-2022 16:05	05-Apr-2022 16:04
Compound	CAS Number	LOR	Unit	EM2206168-001	EM2206168-002	EM2206168-005	EM2206168-006	EM2206168-007
				Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
pH (CaCl2)	----	0.1	pH Unit	7.6	7.7	7.7	7.8	7.6
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	30.5	29.2	29.5	29.6	30.9
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	22	18	24	15	43
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	5	mg/kg	99	81	130	112	139
Copper	7440-50-8	5	mg/kg	60	47	61	57	71
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	<5	<5
Nickel	7440-02-0	5	mg/kg	179	138	192	191	194
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	86	70	91	89	118
<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	1.3	<1.0	1.1	1.3
<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	220	190	220	240	210
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
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	5.0	5.0	5.0	5.0
<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
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



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS	SX_OB_20220405_12_23_SS_Primary_ALS	SX_OB_20220405_16_05_SS_Primary_ALS	SX_OB_20220405_16_14_SS_Triplicate_ALS
Sampling date / time				05-Apr-2022 08:22	05-Apr-2022 08:23	05-Apr-2022 12:23	05-Apr-2022 16:05	05-Apr-2022 16:04
Compound	CAS Number	LOR	Unit	EM2206168-001	EM2206168-002	EM2206168-005	EM2206168-006	EM2206168-007
				Result	Result	Result	Result	Result
<b>EP074A: Monocyclic Aromatic Hydrocarbons - Continued</b>								
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>								
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



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS	SX_OB_20220405_12_23_SS_Primary_ALS	SX_OB_20220405_16_05_SS_Primary_ALS	SX_OB_20220405_16_04_SS_Triplicate_ALS
Sampling date / time				05-Apr-2022 08:22	05-Apr-2022 08:23	05-Apr-2022 12:23	05-Apr-2022 16:05	05-Apr-2022 16:04
Compound	CAS Number	LOR	Unit	EM2206168-001	EM2206168-002	EM2206168-005	EM2206168-006	EM2206168-007
				Result	Result	Result	Result	Result
<b>EP075A: Phenolic Compounds (Halogenated) - Continued</b>								
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
Chrysene	218-01-9	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_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS	SX_OB_20220405_12_23_SS_Primary_ALS	SX_OB_20220405_16_05_SS_Primary_ALS	SX_OB_20220405_16_04_SS_Triplicate_ALS
Sampling date / time				05-Apr-2022 08:22	05-Apr-2022 08:23	05-Apr-2022 12:23	05-Apr-2022 16:05	05-Apr-2022 16:04
Compound	CAS Number	LOR	Unit	EM2206168-001	EM2206168-002	EM2206168-005	EM2206168-006	EM2206168-007
				Result	Result	Result	Result	Result
<b>EP075B: Polynuclear Aromatic Hydrocarbons - Continued</b>								
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	<1.0	<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
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.30	mg/kg	<0.30	<0.30	<0.30	<0.30	<0.30



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS	SX_OB_20220405_12_23_SS_Primary_ALS	SX_OB_20220405_16_05_SS_Primary_ALS	SX_OB_20220405_16_14_SS_Triplicate_ALS
Sampling date / time				05-Apr-2022 08:22	05-Apr-2022 08:23	05-Apr-2022 12:23	05-Apr-2022 16:05	05-Apr-2022 16:04
Compound	CAS Number	LOR	Unit	EM2206168-001	EM2206168-002	EM2206168-005	EM2206168-006	EM2206168-007
				Result	Result	Result	Result	Result
<b>EP075I: Organochlorine Pesticides - Continued</b>								
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	<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
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS	SX_OB_20220405_12_23_SS_Primary_ALS	SX_OB_20220405_16_05_SS_Primary_ALS	SX_OB_20220405_16_14_SS_Triplicate_ALS
Sampling date / time				05-Apr-2022 08:22	05-Apr-2022 08:23	05-Apr-2022 12:23	05-Apr-2022 16:05	05-Apr-2022 16:04
Compound	CAS Number	LOR	Unit	EM2206168-001	EM2206168-002	EM2206168-005	EM2206168-006	EM2206168-007
				Result	Result	Result	Result	Result
<b>EP231B: Perfluoroalkyl Carboxylic Acids - Continued</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_20220405_08 _22_SS_Primary_ALS	SX_OB_20220405_08 _23_SS_Duplicate_AL S	SX_OB_20220405_12 _23_SS_Primary_ALS	SX_OB_20220405_16 _05_SS_Primary_ALS	SX_OB_20220405_16 _14_SS_Triplicate_AL S
Sampling date / time				05-Apr-2022 08:22	05-Apr-2022 08:23	05-Apr-2022 12:23	05-Apr-2022 16:05	05-Apr-2022 16:04
Compound	CAS Number	LOR	Unit	EM2206168-001	EM2206168-002	EM2206168-005	EM2206168-006	EM2206168-007
				Result	Result	Result	Result	Result
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued</b>								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	----	50.0	µg/kg	<50.0	<50.0	<50.0	<50.0	<50.0
Sum of PFHxS and PFOS	355-46-4/1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Sum of PFAS (WA DER List)	----	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
<b>EP066S: PCB Surrogate</b>								
Decachlorobiphenyl	2051-24-3	0.1	%	116	117	97.2	120	119
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	90.7	74.4	88.0	65.6	87.6
Toluene-D8	2037-26-5	0.1	%	86.8	70.7	83.6	61.4	85.6
4-Bromofluorobenzene	460-00-4	0.1	%	89.6	78.6	85.5	76.5	82.0
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>								
Phenol-d6	13127-88-3	0.025	%	104	110	82.9	92.3	110
2-Chlorophenol-D4	93951-73-6	0.025	%	96.4	103	77.5	85.7	102
2,4,6-Tribromophenol	118-79-6	0.025	%	95.7	103	76.6	85.4	102
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>								
Nitrobenzene-D5	4165-60-0	0.025	%	98.5	105	79.1	87.8	104
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	89.1	95.9	72.8	78.6	92.4
2-Fluorobiphenyl	321-60-8	0.025	%	108	115	87.7	96.7	115
Anthracene-d10	1719-06-8	0.025	%	99.0	106	80.0	88.9	106
4-Terphenyl-d14	1718-51-0	0.025	%	106	113	84.0	107	118
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.0002	%	103	96.6	98.7	98.4	91.6
13C8-PFOA	----	0.0002	%	101	102	106	100	103





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220405_20_06_SS_Primary_ALS	SX_OB_20220406_00_11_SS_Primary_ALS	SX_OB_20220406_04_10_SS_Primary_ALS	SX_OB_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS
Sampling date / time				05-Apr-2022 20:06	05-Apr-2022 00:11	05-Apr-2022 04:10	05-Apr-2022 08:22	05-Apr-2022 08:23
Compound	CAS Number	LOR	Unit	EM2206168-008	EM2206168-009	EM2206168-010	EM2206168-011	EM2206168-012
				Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
pH (CaCl2)	----	0.1	pH Unit	7.7	7.8	7.6	----	----
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	30.6	33.0	30.6	----	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	26	25	28	----	----
Cadmium	7440-43-9	1	mg/kg	1	<1	<1	----	----
Chromium	7440-47-3	5	mg/kg	122	95	118	----	----
Copper	7440-50-8	5	mg/kg	60	49	50	----	----
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	208	144	154	----	----
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	85	78	83	----	----
<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	1.1	<1.0	1.2	----	----
<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	240	240	190	----	----
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	----	----
Final pH	----	0.1	pH Unit	4.9	5.0	4.9	----	----
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Final pH	----	0.1	pH Unit	----	----	----	9.2	9.4
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

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Sampling date / time				05-Apr-2022 20:06	05-Apr-2022 00:11	05-Apr-2022 04:10	05-Apr-2022 08:22	05-Apr-2022 08:23
Compound	CAS Number	LOR	Unit	EM2206168-008	EM2206168-009	EM2206168-010	EM2206168-011	EM2206168-012
				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	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
<b>EP074H: Naphthalene</b>								
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	----	----
<b>EP074I: Volatile Halogenated Compounds</b>								
Vinyl chloride	75-01-4	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1-Dichloroethene	75-35-4	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
trans-1,2-Dichloroethene	156-60-5	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
cis-1,2-Dichloroethene	156-59-2	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Chloroform	67-66-3	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1,1-Trichloroethane	71-55-6	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Carbon Tetrachloride	56-23-5	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,2-Dichloroethane	107-06-2	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Trichloroethene	79-01-6	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1,2-Trichloroethane	79-00-5	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Tetrachloroethene	127-18-4	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1,1,2-Tetrachloroethane	630-20-6	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1,2,2-Tetrachloroethane	79-34-5	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Hexachlorobutadiene	87-68-3	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Chlorobenzene	108-90-7	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,4-Dichlorobenzene	106-46-7	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,2-Dichlorobenzene	95-50-1	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,2,4-Trichlorobenzene	120-82-1	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
^ Sum of volatile chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
^ Sum of other chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>								



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220405_20_06_SS_Primary_ALS	SX_OB_20220406_00_11_SS_Primary_ALS	SX_OB_20220406_04_10_SS_Primary_ALS	SX_OB_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS
Sampling date / time				05-Apr-2022 20:06	05-Apr-2022 00:11	05-Apr-2022 04:10	05-Apr-2022 08:22	05-Apr-2022 08:23
Compound	CAS Number	LOR	Unit	EM2206168-008	EM2206168-009	EM2206168-010	EM2206168-011	EM2206168-012
				Result	Result	Result	Result	Result
<b>EP075A: Phenolic Compounds (Halogenated) - Continued</b>								
2-Chlorophenol	95-57-8	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
2,4-Dichlorophenol	120-83-2	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
2,6-Dichlorophenol	87-65-0	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<1.00	<1.00	<1.00	----	----
2,4,5-Trichlorophenol	95-95-4	1.00	mg/kg	<1.00	<1.00	<1.00	----	----
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<1.00	<1.00	<1.00	----	----
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	<0.03	----	----
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	<1.0	<1.0	----	----
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<1.00	<1.00	<1.00	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
Phenol	108-95-2	1	mg/kg	<1	<1	<1	----	----
2-Methylphenol	95-48-7	1	mg/kg	<1	<1	<1	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	----	----
2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	<1	----	----
2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	<1	----	----
2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	<5	----	----
4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	<5	----	----
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	<5	----	----
Dinoseb	88-85-7	20	mg/kg	<20	<20	<20	----	----
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	20	mg/kg	<20	<20	<20	----	----
^ Sum of Phenols (non-halogenated)	----	20	mg/kg	<20	<20	<20	----	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220405_20_06_SS_Primary_ALS	SX_OB_20220406_00_11_SS_Primary_ALS	SX_OB_20220406_04_10_SS_Primary_ALS	SX_OB_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS
Sampling date / time				05-Apr-2022 20:06	05-Apr-2022 00:11	05-Apr-2022 04:10	05-Apr-2022 08:22	05-Apr-2022 08:23
Compound	CAS Number	LOR	Unit	EM2206168-008	EM2206168-009	EM2206168-010	EM2206168-011	EM2206168-012
				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

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Sampling date / time				05-Apr-2022 20:06	05-Apr-2022 00:11	05-Apr-2022 04:10	05-Apr-2022 08:22	05-Apr-2022 08:23
Compound	CAS Number	LOR	Unit	EM2206168-008	EM2206168-009	EM2206168-010	EM2206168-011	EM2206168-012
				Result	Result	Result	Result	Result
<b>EP075I: Organochlorine Pesticides - Continued</b>								
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.30	mg/kg	<0.30	<0.30	<0.30	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	<0.10	----	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	<0.03	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	----	20	mg/kg	<20	<20	<20	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	----	----
C6 - C10 Fraction	C6_C10	20	mg/kg	<20	<20	<20	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	----
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	----	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	mg/kg	<20	<20	<20	----	----
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	5.0	µg/kg	<5.0	<5.0	<5.0	----	----



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 (Matrix: SOIL)

Sample ID

				SX_OB_20220405_20_06_SS_Primary_ALS	SX_OB_20220406_00_11_SS_Primary_ALS	SX_OB_20220406_04_10_SS_Primary_ALS	SX_OB_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS
Sampling date / time				05-Apr-2022 20:06	05-Apr-2022 00:11	05-Apr-2022 04:10	05-Apr-2022 08:22	05-Apr-2022 08:23
Compound	CAS Number	LOR	Unit	EM2206168-008	EM2206168-009	EM2206168-010	EM2206168-011	EM2206168-012
				Result	Result	Result	Result	Result
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	5	µg/kg	<5	<5	<5	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorononanoic acid (PFNA)	375-95-1	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	10.0	µg/kg	<10.0	<10.0	<10.0	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	10.0	µg/kg	<10.0	<10.0	<10.0	----	----
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220405_20_06_SS_Primary_ALS	SX_OB_20220406_00_11_SS_Primary_ALS	SX_OB_20220406_04_10_SS_Primary_ALS	SX_OB_20220405_08_22_SS_Primary_ALS	SX_OB_20220405_08_23_SS_Duplicate_ALS
Sampling date / time				05-Apr-2022 20:06	05-Apr-2022 00:11	05-Apr-2022 04:10	05-Apr-2022 08:22	05-Apr-2022 08:23
Compound	CAS Number	LOR	Unit	EM2206168-008	EM2206168-009	EM2206168-010	EM2206168-011	EM2206168-012
				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	%	120	119	110	----	----
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	90.7	84.3	93.1	----	----
Toluene-D8	2037-26-5	0.1	%	77.0	80.0	89.0	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	95.0	80.5	91.9	----	----
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>								
Phenol-d6	13127-88-3	0.025	%	112	106	108	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%	104	99.0	100	----	----
2,4,6-Tribromophenol	118-79-6	0.025	%	104	99.1	113	----	----
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>								
Nitrobenzene-D5	4165-60-0	0.025	%	106	99.9	101	----	----
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	96.2	91.1	91.8	----	----
2-Fluorobiphenyl	321-60-8	0.025	%	116	111	113	----	----
Anthracene-d10	1719-06-8	0.025	%	107	103	109	----	----
4-Terphenyl-d14	1718-51-0	0.025	%	100	99.2	109	----	----
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.0002	%	96.0	97.6	91.5	----	----
13C8-PFOA	----	0.0002	%	102	109	98.2	----	----



**Analytical Results**

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220405_12 _23_SS_Primary_ALS	SX_OB_20220405_16 _05_SS_Primary_ALS	SX_OB_20220405_16 _14_SS_Triplicate_AL S	SX_OB_20220405_20 _06_SS_Primary_ALS	SX_OB_20220406_00 _11_SS_Primary_ALS
Sampling date / time				05-Apr-2022 12:23	05-Apr-2022 16:05	05-Apr-2022 16:14	05-Apr-2022 20:06	05-Apr-2022 00:11
Compound	CAS Number	LOR	Unit	EM2206168-013	EM2206168-014	EM2206168-015	EM2206168-016	EM2206168-017
				Result	Result	Result	Result	Result
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Final pH	----	0.1	pH Unit	8.9	9.5	8.3	8.8	9.6





**Analytical Results**

Sub-Matrix: <b>SOIL</b> (Matrix: <b>SOIL</b> )			Sample ID	<b>SX_OB_20220406_04 _10_SS_Primary_ALS</b>	----	----	----	----
			Sampling date / time	05-Apr-2022 04:10	----	----	----	----
Compound	CAS Number	LOR	Unit	<b>EM2206168-018</b>	-----	-----	-----	-----
				Result	----	----	----	----
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
<b>Final pH</b>	----	0.1	pH Unit	<b>9.4</b>	----	----	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID		SX_OB_20220405_08 _32_SR_Rinsate_ALS	SX_OB_20220405_08 _33_SB_Blank_ALS	----	----	----
Sampling date / time			05-Apr-2022 08:32		05-Apr-2022 08:33		----	----	----
Compound	CAS Number	LOR	Unit	EM2206168-003	EM2206168-004	-----	-----	-----	
				Result	Result	---	---	---	
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----	
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>									
Perfluorobutanoic acid (PFBA)	375-22-4	0.10	µg/L	<0.10	<0.10	----	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----	
<b>EP231C: Perfluoroalkyl Sulfonamides</b>									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----	



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SX_OB_20220405_08 _32_SR_Rinsate_ALS	SX_OB_20220405_08 _33_SB_Blank_ALS	----	----	----
Sampling date / time				05-Apr-2022 08:32	05-Apr-2022 08:33	----	----	----	
Compound	CAS Number	LOR	Unit	EM2206168-003	EM2206168-004	-----	-----	-----	
				Result	Result	---	---	---	
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>									
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	----	----	----	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	----	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	----	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	----	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	----	----	----	
<b>EP231P: PFAS Sums</b>									
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	----	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----	
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	----	----	----	
<b>EP231S: PFAS Surrogate</b>									
13C4-PFOS	----	0.02	%	97.6	102	----	----	----	
13C8-PFOA	----	0.02	%	100	98.8	----	----	----	



## 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

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>EM2206168</b>	Page	: 1 of 31
Client	: <b>AGON ENVIRONMENTAL PTY LTD</b>	Laboratory	: Environmental Division Melbourne
Contact	: CRAIG TRIMBUR	Contact	: Josh Alexander
Address	: D1.1 63-85 TURNER STREET PORT MELBOURNE 3207	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +61-3-8549 9600
Project	: JC0927	Date Samples Received	: 06-Apr-2022
Order number	: ----	Date Analysis Commenced	: 07-Apr-2022
C-O-C number	: 20220406042745-ALS-21	Issue Date	: 12-Apr-2022
Sampler	: Emma. S - EP Risk LR - EP Risk		
Site	:		
Quote number	: EN/150/19 -WGTP -Bulk Sample Quote		
No. of samples received	: 18		
No. of samples analysed	: 18		



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

This Quality Control Report contains the following information:

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

### Signatories

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

Signatories	Position	Accreditation Category
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	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 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: 4274088)</b>									
EM2206136-009	Anonymous	EG005T: Chromium	7440-47-3	2	mg/kg	34	30	10.5	0% - 50%
EM2206136-009	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	50	61	20.0	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	18	21	17.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	21	30	34.7	No Limit
EM2206146-009	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	79	79	0.0	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	142	151	5.9	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	10	13	20.8	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	47	51	9.0	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	70	71	0.0	0% - 50%		
<b>EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4279077)</b>									
EM2205832-001	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	6.9	7.0	2.0	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>EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4279077) - continued</b>										
EM2206168-010	SX_OB_20220406_04_10_ SS_Primary_ALS	EA001: pH (CaCl2)	----	0.1	pH Unit	7.6	7.6	0.0	0% - 20%	
<b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4276046)</b>										
EM2206136-003	Anonymous	EA055: Moisture Content	----	0.1	%	9.3	8.8	5.5	0% - 20%	
EM2206146-005	Anonymous	EA055: Moisture Content	----	0.1	%	30.9	31.3	1.3	0% - 20%	
<b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4276047)</b>										
EM2206168-008	SX_OB_20220405_20_06_ SS_Primary_ALS	EA055: Moisture Content	----	0.1	%	30.6	29.5	3.8	0% - 20%	
<b>EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4274089)</b>										
EM2206136-009	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
EM2206146-009	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 4276021)</b>										
EM2206146-008	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	1.2	1.1	0.0	No Limit	
EM2206168-010	SX_OB_20220406_04_10_ SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	1.2	1.8	36.2	No Limit	
<b>EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4276086)</b>										
EM2206136-006	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit	
EM2206167-054	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	3	4	0.0	No Limit	
<b>EK040T: Fluoride Total (QC Lot: 4276028)</b>										
EM2206136-007	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	140	190	28.5	No Limit	
EM2206168-002	SX_OB_20220405_08_23_ SS_Duplicate_ALS	EK040T: Fluoride	16984-48-8	40	mg/kg	190	230	14.9	No Limit	
<b>EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4273861)</b>										
EM2206146-001	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
EM2206168-006	SX_OB_20220405_16_05_ 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: 4273024)</b>										
EM2206168-001	SX_OB_20220405_08_22_ SS_Primary_ALS	EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit	
		EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074-UT: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
			106-42-3							
		EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit			
<b>EP074H: Naphthalene (QC Lot: 4273024)</b>										
EM2206168-001	SX_OB_20220405_08_22_ 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: 4273024)</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>EP074I: Volatile Halogenated Compounds (QC Lot: 4273024) - continued</b>									
EM2206168-001	SX_OB_20220405_08_22_ 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: 4273863)</b>									
EM2206146-001	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit
EM2206168-006	SX_OB_20220405_16_05_ SS_Primary_ALS	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	0.0	No Limit		





Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP075A: Phenolic Compounds (Halogenated) (QC Lot: 4273863) - continued</b>									
EM2206168-006	SX_OB_20220405_16_05_ SS_Primary_ALS	EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-9 0-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit
<b>EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4273863)</b>									
EM2206146-001	Anonymous	EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: Dinoseb	88-85-7	5	mg/kg	<20	<20	0.0	No Limit
EM2206168-006	SX_OB_20220405_16_05_ SS_Primary_ALS	EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<20	<20	0.0	No Limit
		EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.0	No Limit
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4273863)</b>	Anonymous	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4273863) - continued</b>									
EM2206146-001	Anonymous	EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	<1.0	0.0	No Limit
EM2206168-006	SX_OB_20220405_16_05_ SS_Primary_ALS	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Dibenzo(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: 4273863)</b>									
EM2206146-001	Anonymous	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit



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: 4273863) - continued</b>									
EM2206168-006	SX_OB_20220405_16_05_ SS_Primary_ALS	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EP075-EM: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP075-EM: 4,4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
<b>EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4273024)</b>									
EM2206168-001	SX_OB_20220405_08_22_ 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: 4273862)</b>									
EM2206146-001	Anonymous	EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EM2206168-006	SX_OB_20220405_16_05_ 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: 4273024)</b>									
EM2206168-001	SX_OB_20220405_08_22_ 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: 4273862)</b>									
EM2206146-001	Anonymous	EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit



Sub-Matrix: SOIL

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4273862) - continued</b>									
EM2206146-001	Anonymous	EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EM2206168-006	SX_OB_20220405_16_05_ 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: 4274434)</b>									
EM2205700-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0006	0.0006	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2206146-008	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: 4274434)</b>									
EM2205700-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (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
		EM2206146-008	Anonymous	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



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: 4274434) - continued</b>									
EM2206146-008	Anonymous	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: 4274434)</b>									
EM2205700-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2206146-008	Anonymous	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: 4274434)</b>									
EM2205700-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4274434) - continued</b>									
EM2206146-008	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: 4274434)</b>									
EM2205700-001	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0006	0.0006	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0006	0.0006	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0006	0.0006	0.0	No Limit
EM2206146-008	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: 4278168)</b>									
EM2206146-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2206168-006	SX_OB_20220405_16_05_SS_Primary_ALS	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit		
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4278246)</b>									
EM2206146-010	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit



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: 4278246) - continued</b>									
EM2206168-014	SX_OB_20220405_16_05_ SS_Primary_ALS	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4279880)</b>									
EM2206168-003	SX_OB_20220405_08_32_ SR_Rinsate_ALS	EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2206245-009	Anonymous	EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.50	<0.50	0.0	No Limit
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.50	<0.50	0.0	No Limit
		EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.50	<0.50	0.0	No Limit
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.50	<0.50	0.0	No Limit
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.50	<0.50	0.0	No Limit
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.50	<0.50	0.0	No Limit
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4278168)</b>									
EM2206146-001	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



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: 4278168) - continued</b>									
EM2206146-001	Anonymous	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
EM2206168-006	SX_OB_20220405_16_05_ SS_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit		
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4278246)</b>									
EM2206146-010	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		
EM2206168-014	SX_OB_20220405_16_05_ SS_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit		

**EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4279880)**





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: 4279880) - continued</b>											
EM2206168-003	SX_OB_20220405_08_32_ SR_Rinsate_ALS	EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit		
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit		
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit		
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit		
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit		
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit		
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit		
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit		
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit		
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit		
EM2206245-009	Anonymous	EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	<0.10	0.0	No Limit		
		EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.50	<0.50	0.0	No Limit		
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.50	<0.50	0.0	No Limit		
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.50	<0.50	0.0	No Limit		
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.50	<0.50	0.0	No Limit		
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.50	<0.50	0.0	No Limit		
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.50	<0.50	0.0	No Limit		
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.50	<0.50	0.0	No Limit		
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.50	<0.50	0.0	No Limit		
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.50	<0.50	0.0	No Limit		
EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<1.25	<1.25	0.0	No Limit				
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4278168)</b>	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		
		EM2206168-006	SX_OB_20220405_16_05_ SS_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: 4278168) - continued</b>									
EM2206168-006	SX_OB_20220405_16_05_ SS_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: 4278246)</b>									
EM2206146-010	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2206168-014	SX_OB_20220405_16_05_ SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4279880)</b>									



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: 4279880) - continued</b>									
EM2206168-003	SX_OB_20220405_08_32_ SR_Rinsate_ALS	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2206245-009	Anonymous	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.50	<0.50	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.50	<0.50	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.50	<0.50	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<1.25	<1.25	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<1.25	<1.25	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<1.25	<1.25	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<1.25	<1.25	0.0	No Limit
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4278168)</b>									
EM2206146-001	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
EM2206168-006	SX_OB_20220405_16_05_ SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit



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: 4278168) - continued</b>									
EM2206168-006	SX_OB_20220405_16_05_ SS_Primary_ALS	EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4278246)</b>									
EM2206146-010	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		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
EM2206168-014	SX_OB_20220405_16_05_ SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4279880)</b>									
EM2206168-003	SX_OB_20220405_08_32_ SR_Rinsate_ALS	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2206245-009	Anonymous	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.50	<0.50	0.0	No Limit
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.50	<0.50	0.0	No Limit
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.50	<0.50	0.0	No Limit
		EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.50	<0.50	0.0	No Limit
<b>EP231P: PFAS Sums (QC Lot: 4278168)</b>									
EM2206146-001	Anonymous	EP231X: Sum of PFAS	----	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>EP231P: PFAS Sums (QC Lot: 4278168) - continued</b>									
EM2206146-001	Anonymous	EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2206168-006	SX_OB_20220405_16_05_SS_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231P: PFAS Sums (QC Lot: 4278246)</b>									
EM2206146-010	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2206168-014	SX_OB_20220405_16_05_SS_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231P: PFAS Sums (QC Lot: 4279880)</b>									
EM2206168-003	SX_OB_20220405_08_32_SR_Rinsate_ALS	EP231X-INJ: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit
EM2206245-009	Anonymous	EP231X-INJ: Sum of PFAS	----	0.01	µg/L	<0.50	<0.50	0.0	No Limit
		EP231X-INJ: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.50	<0.50	0.0	No Limit
		EP231X-INJ: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.50	<0.50	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: 4274088)</b>								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	103	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	60.6	50.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	105	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	95.1	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	87.7	70.0	130
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	99.8	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	100	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	71.7	70.0	130
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	87.0	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	75.2	70.0	130
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4276229)</b>								
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.3	----	----	----	----
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4276230)</b>								
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.3	----	----	----	----
<b>EA001: pH in soil using 0.01M CaCl extract (QCLot: 4279077)</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: 4274089)</b>								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	96.9	70.0	130
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4276021)</b>								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	82.1	70.0	130
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4276086)</b>								
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	102	70.0	130
<b>EK040T: Fluoride Total (QCLot: 4276028)</b>								
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	83.3	75.2	110
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4273861)</b>								
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	124	67.4	136
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4273024)</b>								
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	90.5	69.2	116
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	91.1	67.7	116
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	92.5	66.6	115



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>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4273024) - continued</b>								
EP074-UT: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4.2 mg/kg	93.3	65.2	112
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	93.6	69.4	111
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	92.5	68.4	110
<b>EP074H: Naphthalene (QCLot: 4273024)</b>								
EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	0.6 mg/kg	113	72.3	114
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4273024)</b>								
EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	67.2	47.0	138
EP074-UT: 1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	87.2	57.6	125
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	83.1	72.3	115
EP074-UT: trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	84.8	60.5	122
EP074-UT: cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	91.6	70.3	112
EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	87.6	66.6	115
EP074-UT: 1,1,1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	85.8	64.4	122
EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	83.8	58.4	127
EP074-UT: 1,2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	102	72.9	114
EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	88.9	64.7	115
EP074-UT: 1,1,2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	95.2	72.6	116
EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	88.8	60.0	119
EP074-UT: 1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	89.0	71.8	116
EP074-UT: 1,1,2,2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	98.2	66.1	116
EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	81.5	39.8	128
EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	90.8	70.3	113
EP074-UT: 1,4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	88.6	62.6	113
EP074-UT: 1,2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	91.0	70.8	110
EP074-UT: 1,2,4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	82.7	48.4	120
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4273863)</b>								
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	104	74.5	126
EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	106	72.7	126
EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	101	73.5	132
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	102	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	107	72.4	128
EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	95.9	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	110	71.9	128
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	96.0	54.4	135
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4273863)</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: 4273863) - continued</b>									
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	105	71.5	130	
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	100	73.4	129	
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	101	74.3	129	
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	106	70.9	133	
EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	107	71.8	132	
EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	84.2	41.0	156	
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	109	65.3	134	
EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	98.2	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	101	62.0	128	
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	87.4	34.5	137	
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4273863)</b>									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	103	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	103	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	102	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	103	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	105	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	104	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	106	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	106	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	103	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	104	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	112	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	103	65.1	130	
EP075-EM: Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	111	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	110	72.9	135	
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	106	71.3	134	
<b>EP075I: Organochlorine Pesticides (QCLot: 4273863)</b>									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	111	71.0	129	
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	110	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	105	70.8	130	
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	107	76.5	134	
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	104	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	104	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	105	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	104	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: 4273863) - continued</b>									
EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	103	71.0	132	
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	103	78.0	133	
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	101	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	111	71.4	135	
EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	103	74.8	134	
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	103	70.2	135	
EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	102	77.7	133	
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	104	63.6	135	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4273024)</b>									
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	87.8	61.1	119	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4273862)</b>									
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	760 mg/kg	106	74.4	129	
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	3270 mg/kg	102	81.0	123	
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1550 mg/kg	99.4	81.8	121	
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	102	70.0	130	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4273024)</b>									
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	86.2	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: 4273862)</b>									
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1110 mg/kg	127	75.4	132	
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	4180 mg/kg	96.0	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	290 mg/kg	98.6	73.3	136	
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	102	70.0	130	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4274434)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	91.0	72.0	128	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	92.5	73.0	123	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	79.1	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	102	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	89.5	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	100	59.0	134	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4274434)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	92.9	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.7	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.1	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.2	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.0	69.0	133	



Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report				
					Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	High
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4274434) - continued</b>									
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.8	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.2	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.2	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.4	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	86.8	69.0	133	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4274434)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.1	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	96.0	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	97.8	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	88.9	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	97.1	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.4	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	61.0	139	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4274434)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	99.7	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	101	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	107	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	87.2	70.0	130	
<b>EP231P: PFAS Sums (QCLot: 4274434)</b>									
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----	
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----	
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----	

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report				
					Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	High
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4278168)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	95.9	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	110	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	107	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	106	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	98.1	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	96.6	53.0	142	



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>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4278246)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	105	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	97.5	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	96.4	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	101	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	100	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	99.4	53.0	142	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4279880)</b>									
EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.444 µg/L	92.6	72.0	130	
EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.47 µg/L	96.4	71.0	127	
EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.457 µg/L	97.5	68.0	131	
EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.477 µg/L	99.0	69.0	134	
EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.465 µg/L	91.1	65.0	140	
EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.482 µg/L	88.7	53.0	142	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4278168)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	99.4	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	99.9	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	95.8	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	99.8	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	102	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	91.1	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.7	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	108	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	103	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	94.7	71.0	132	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4278246)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	91.1	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	93.2	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	93.6	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	94.9	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	93.0	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	95.3	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	91.9	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	86.9	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	88.0	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	94.2	71.0	132	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4279880)</b>									



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4279880) - continued</b>									
EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	2.5 µg/L	93.1	73.0	129	
EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.5 µg/L	94.1	72.0	129	
EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.5 µg/L	92.6	72.0	129	
EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.5 µg/L	94.1	72.0	130	
EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.5 µg/L	95.8	71.0	133	
EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.5 µg/L	96.1	69.0	130	
EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.5 µg/L	87.1	71.0	129	
EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.5 µg/L	96.7	69.0	133	
EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.5 µg/L	93.1	72.0	134	
EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.5 µg/L	88.2	65.0	144	
EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	1.25 µg/L	96.1	71.0	132	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4278168)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	105	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	95.9	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	96.6	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	97.1	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	96.0	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	112	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	106	61.0	135	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4278246)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	101	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	90.4	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	92.2	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	92.2	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	96.9	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	98.2	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	94.7	61.0	135	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4279880)</b>									
EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.5 µg/L	98.2	67.0	137	
EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	1.25 µg/L	104	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: 4279880) - continued</b>									
EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	1.25 µg/L	90.8	70.0	130	
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	1.25 µg/L	97.8	70.0	130	
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	1.25 µg/L	94.7	70.0	130	
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.5 µg/L	98.0	65.0	136	
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.5 µg/L	87.4	61.0	135	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4278168)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	101	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	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	118	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	81.4	70.0	130	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4278246)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	92.0	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	102	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	114	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	79.7	70.0	130	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4279880)</b>									
EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.469 µg/L	96.8	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	96.4	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	94.7	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	91.0	70.0	130	
<b>EP231P: PFAS Sums (QCLot: 4278168)</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: 4278246)</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: 4279880)</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	----	----	----	----	



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: 4279880) - continued</b>								
EP231X-INJ: 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: 4274088)</b>							
EM2206136-011	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	96.6	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	94.2	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	84.0	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	97.6	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	92.3	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	# Not Determined	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	87.3	80.0	120
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4274089)</b>							
EM2206136-011	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	102	76.0	116
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4276021)</b>							
EM2206146-009	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	62.3	58.0	114
EM2206146-009	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	86.3	58.0	114
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4276086)</b>							
EM2206136-007	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	84.6	70.0	130
<b>EK040T: Fluoride Total (QCLot: 4276028)</b>							
EM2206146-001	Anonymous	EK040T: Fluoride	16984-48-8	400 mg/kg	73.0	70.0	130
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4273861)</b>							
EM2206146-005	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	130	59.6	152
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4273024)</b>							
EM2206168-002	SX_OB_20220405_08_23_SS_Duplicate_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	89.2	53.7	130
		EP074-UT: Toluene	108-88-3	2 mg/kg	92.5	55.1	124
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4273024)</b>							
EM2206168-002	SX_OB_20220405_08_23_SS_Duplicate_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	76.7	38.4	145
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	89.1	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	89.8	55.5	122



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>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4273863)</b>							
EM2206146-002	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	111	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	108	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	94.9	10.0	144
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4273863)</b>							
EM2206146-002	Anonymous	EP075-EM: Phenol	108-95-2	3 mg/kg	110	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	110	34.2	129
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4273863)</b>							
EM2206146-002	Anonymous	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	102	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	107	37.8	152
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4273024)</b>							
EM2206168-002	SX_OB_20220405_08_23_SS_Duplicate_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	72.9	42.3	111
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4273862)</b>							
EM2206146-006	Anonymous	EP071-EM: C10 - C14 Fraction	----	760 mg/kg	104	71.3	126
		EP071-EM: C15 - C28 Fraction	----	3270 mg/kg	100.0	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1550 mg/kg	97.1	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	5580 mg/kg	98.9	70.0	130
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4273024)</b>							
EM2206168-002	SX_OB_20220405_08_23_SS_Duplicate_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	73.7	39.9	109
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4273862)</b>							
EM2206146-006	Anonymous	EP071-EM: >C10 - C16 Fraction	----	1110 mg/kg	124	71.5	130
		EP071-EM: >C16 - C34 Fraction	----	4180 mg/kg	93.7	76.9	119
		EP071-EM: >C34 - C40 Fraction	----	290 mg/kg	102	65.3	139
		EP071-EM: >C10 - C40 Fraction (sum)	----	5580 mg/kg	98.9	70.0	130
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4274434)</b>							
EM2205700-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	106	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	93.0	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	96.1	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	92.3	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	83.0	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	93.7	59.0	134
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4274434)</b>							
EM2205700-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	92.9	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	86.6	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	102	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	90.9	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	92.4	69.0	133



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>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4274434) - continued</b>							
EM2205700-002	Anonymous	EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	92.8	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	121	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	93.4	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	90.4	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	87.2	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	92.6	69.0	133
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4274434)</b>							
EM2205700-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	87.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	107	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	106	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	92.7	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	101	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	95.8	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: 4274434)</b>							
EM2205700-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	90.6	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	102	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	112	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	72.3	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike Concentration	SpikeRecovery(%) MS	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4278168)</b>							
EM2206168-007	SX_OB_20220405_16_14_SS_Triplicate_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	103	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	102	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	104	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	103	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	95.1	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	99.5	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4278246)</b>							
EM2206146-011	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	102	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	82.9	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	86.8	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: 4278246) - continued</b>							
EM2206146-011	Anonymous	EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	87.0	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	89.5	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	97.3	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4279880)</b>							
EM2206168-004	SX_OB_20220405_08_33_SB_Blank_ALS	EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.444 µg/L	103	72.0	130
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.47 µg/L	108	71.0	127
		EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.457 µg/L	102	68.0	131
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.477 µg/L	109	69.0	134
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.465 µg/L	94.3	65.0	140
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.482 µg/L	98.1	53.0	142
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4278168)</b>							
EM2206168-007	SX_OB_20220405_16_14_SS_Triplicate_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	92.4	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	102	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	95.3	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	102	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	101	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	104	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	84.8	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	95.9	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	109	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	102	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	93.8	71.0	132
		<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4278246)</b>					
EM2206146-011	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	81.9	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	90.3	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	95.8	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	93.8	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	91.7	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	89.7	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	100	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	87.3	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	88.6	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	74.6	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	83.2	71.0	132
		<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4279880)</b>					
EM2206168-004	SX_OB_20220405_08_33_SB_Blank_ALS	EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	2.5 µg/L	102	73.0	129
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.5 µg/L	100	72.0	129
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.5 µg/L	102	72.0	129



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: 4279880) - continued</b>							
EM2206168-004	SX_OB_20220405_08_33_SB_Blank_ALS	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	105	71.0	133
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.5 µg/L	103	69.0	130
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.5 µg/L	97.9	71.0	129
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.5 µg/L	98.1	69.0	133
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.5 µg/L	103	72.0	134
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.5 µg/L	99.6	65.0	144
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	1.25 µg/L	103	71.0	132
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4278168)</b>							
EM2206168-007	SX_OB_20220405_16_14_SS_Triplicate_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	108	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	99.9	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	95.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	101	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	116	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	106	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4278246)</b>							
EM2206146-011	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	96.8	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	85.0	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	70.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	84.1	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	82.2	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	86.1	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	94.1	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4279880)</b>							
EM2206168-004	SX_OB_20220405_08_33_SB_Blank_ALS	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.5 µg/L	103	67.0	137
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	1.25 µg/L	111	68.0	141



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: 4279880) - continued</b>							
EM2206168-004	SX_OB_20220405_08_33_SB_Blank_ALS	EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	1.25 µg/L	103	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	1.25 µg/L	109	70.0	130
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	1.25 µg/L	105	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.5 µg/L	102	65.0	136
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.5 µg/L	106	61.0	135
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4278168)</b>							
EM2206168-007	SX_OB_20220405_16_14_SS_Triplicate_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	98.9	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	111	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	121	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	73.6	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4278246)</b>							
EM2206146-011	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	92.6	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	103	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	94.7	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	71.3	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4279880)</b>							
EM2206168-004	SX_OB_20220405_08_33_SB_Blank_ALS	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.469 µg/L	100	63.0	143
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.476 µg/L	106	64.0	140
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.48 µg/L	100	67.0	138
		EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.483 µg/L	97.2	70.0	130

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

Work Order	: EM2206168	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	: 06-Apr-2022
Site	:	Issue Date	: 12-Apr-2022
Sampler	: Emma. S - EP Risk LR - EP Risk	No. of samples received	: 18
Order number	: ----	No. of samples analysed	: 18

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

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

### Summary of Outliers

#### Outliers : Quality Control Samples

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

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

#### Outliers : Analysis Holding Time Compliance

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

#### Outliers : Frequency of Quality Control Samples

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



### Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
<b>Matrix Spike (MS) Recoveries</b>							
EG005(ED093)T: Total Metals by ICP-AES	EM2206136--011	Anonymous	Nickel	7440-02-0	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

### Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
<b>Soil Glass Jar - Unpreserved (EA001)</b>								
SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	11-Apr-2022	12-Apr-2022	✔	11-Apr-2022	11-Apr-2022	✔
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
<b>Soil Glass Jar - Unpreserved (EA055)</b>								
SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	----	----	----	08-Apr-2022	19-Apr-2022	✔
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
<b>Soil Glass Jar - Unpreserved (EG005T)</b>								
SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	02-Oct-2022	✔	09-Apr-2022	02-Oct-2022	✔
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
<b>Soil Glass Jar - Unpreserved (EG035T)</b>								
SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	03-May-2022	✔	09-Apr-2022	03-May-2022	✔



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>								
<b>Soil Glass Jar - Unpreserved (EG048G)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	03-May-2022	✓	09-Apr-2022	15-Apr-2022	✓
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
<b>Soil Glass Jar - Unpreserved (EK026SF)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	19-Apr-2022	✓	09-Apr-2022	22-Apr-2022	✓
<b>EK040T: Fluoride Total</b>								
<b>Soil Glass Jar - Unpreserved (EK040T)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	03-May-2022	✓	12-Apr-2022	03-May-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_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	02-Oct-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_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	02-Oct-2022	✓	----	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
<b>Soil Glass Jar - Unpreserved (EP066-EM)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	19-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	12-Apr-2022	✓	08-Apr-2022	12-Apr-2022	✓



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EP074H: Naphthalene</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	12-Apr-2022	✓	08-Apr-2022	12-Apr-2022	✓
<b>EP074I: Volatile Halogenated Compounds</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	12-Apr-2022	✓	08-Apr-2022	12-Apr-2022	✓
<b>EP075A: Phenolic Compounds (Halogenated)</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	19-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	19-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	19-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>EP075I: Organochlorine Pesticides</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	19-Apr-2022	✓	08-Apr-2022	18-May-2022	✓
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	12-Apr-2022	✓	08-Apr-2022	12-Apr-2022	✓



Matrix: **SOIL**

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	08-Apr-2022	12-Apr-2022	✓	08-Apr-2022	12-Apr-2022	✓
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	07-Apr-2022	02-Oct-2022	✓	11-Apr-2022	17-May-2022	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	07-Apr-2022	02-Oct-2022	✓	11-Apr-2022	17-May-2022	✓
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	07-Apr-2022	02-Oct-2022	✓	11-Apr-2022	17-May-2022	✓
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	07-Apr-2022	02-Oct-2022	✓	11-Apr-2022	17-May-2022	✓
<b>EP231P: PFAS Sums</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	05-Apr-2022	07-Apr-2022	02-Oct-2022	✓	11-Apr-2022	17-May-2022	✓

Matrix: **WATER**

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

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





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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_OB_20220405_08_32_SR_Rinsate_ALS,	SX_OB_20220405_08_33_SB_Blank_ALS	<b>05-Apr-2022</b>	<b>11-Apr-2022</b>	02-Oct-2022	✓	<b>11-Apr-2022</b>	02-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS, SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS, SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	<b>08-Apr-2022</b>	<b>09-Apr-2022</b>	05-Oct-2022	✓	<b>09-Apr-2022</b>	05-Oct-2022	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_OB_20220405_08_32_SR_Rinsate_ALS,	SX_OB_20220405_08_33_SB_Blank_ALS	<b>05-Apr-2022</b>	<b>11-Apr-2022</b>	02-Oct-2022	✓	<b>11-Apr-2022</b>	02-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS, SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS, SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	<b>08-Apr-2022</b>	<b>09-Apr-2022</b>	05-Oct-2022	✓	<b>09-Apr-2022</b>	05-Oct-2022	✓
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_OB_20220405_08_32_SR_Rinsate_ALS,	SX_OB_20220405_08_33_SB_Blank_ALS	<b>05-Apr-2022</b>	<b>11-Apr-2022</b>	02-Oct-2022	✓	<b>11-Apr-2022</b>	02-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS, SX_OB_20220405_08_22_SS_Primary_ALS, SX_OB_20220405_12_23_SS_Primary_ALS, SX_OB_20220405_16_14_SS_Triplicate_ALS, SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS, SX_OB_20220405_08_23_SS_Duplicate_ALS, SX_OB_20220405_16_05_SS_Primary_ALS, SX_OB_20220405_20_06_SS_Primary_ALS, SX_OB_20220406_04_10_SS_Primary_ALS	<b>08-Apr-2022</b>	<b>09-Apr-2022</b>	05-Oct-2022	✓	<b>09-Apr-2022</b>	05-Oct-2022	✓



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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
<b>HDPE (no PTFE) (EP231X-INJ)</b>								
SX_OB_20220405_08_32_SR_Rinsate_ALS,	SX_OB_20220405_08_33_SB_Blank_ALS	05-Apr-2022	11-Apr-2022	02-Oct-2022	✓	11-Apr-2022	02-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b>								
SX_OB_20220405_08_22_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS,	08-Apr-2022	09-Apr-2022	05-Oct-2022	✓	09-Apr-2022	05-Oct-2022	✓
SX_OB_20220405_12_23_SS_Primary_ALS,	SX_OB_20220405_16_05_SS_Primary_ALS,							
SX_OB_20220405_16_14_SS_Triplicate_ALS,	SX_OB_20220405_20_06_SS_Primary_ALS,							
SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220406_04_10_SS_Primary_ALS,							
SX_OB_20220405_08_22_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS,							
SX_OB_20220405_12_23_SS_Primary_ALS,	SX_OB_20220405_16_05_SS_Primary_ALS,							
SX_OB_20220405_16_14_SS_Triplicate_ALS,	SX_OB_20220405_20_06_SS_Primary_ALS,							
SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220406_04_10_SS_Primary_ALS							
<b>EP231P: PFAS Sums</b>								
<b>HDPE (no PTFE) (EP231X-INJ)</b>								
SX_OB_20220405_08_32_SR_Rinsate_ALS,	SX_OB_20220405_08_33_SB_Blank_ALS	05-Apr-2022	11-Apr-2022	02-Oct-2022	✓	11-Apr-2022	02-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b>								
SX_OB_20220405_08_22_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS,	08-Apr-2022	09-Apr-2022	05-Oct-2022	✓	09-Apr-2022	05-Oct-2022	✓
SX_OB_20220405_12_23_SS_Primary_ALS,	SX_OB_20220405_16_05_SS_Primary_ALS,							
SX_OB_20220405_16_14_SS_Triplicate_ALS,	SX_OB_20220405_20_06_SS_Primary_ALS,							
SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220406_04_10_SS_Primary_ALS,							
SX_OB_20220405_08_22_SS_Primary_ALS,	SX_OB_20220405_08_23_SS_Duplicate_ALS,							
SX_OB_20220405_12_23_SS_Primary_ALS,	SX_OB_20220405_16_05_SS_Primary_ALS,							
SX_OB_20220405_16_14_SS_Triplicate_ALS,	SX_OB_20220405_20_06_SS_Primary_ALS,							
SX_OB_20220406_00_11_SS_Primary_ALS,	SX_OB_20220406_04_10_SS_Primary_ALS							



## 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	10	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	3	27	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	2	15	13.33	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	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	10	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	15	6.67	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	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
Deionised Water Leach - Plastic Leaching Vessel	EN60-DIa-P	2	27	7.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	15	6.67	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	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard



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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
<b>Analytical Methods</b>							
<b>Matrix Spikes (MS)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	10	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	15	6.67	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	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard

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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	30	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	30	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	30	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	30	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard



## Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
pH in soil using a 0.01M CaCl <sub>2</sub> extract	EA001	SOIL	In house: Referenced to Rayment and Lyons 4B3 (mod.) or 4B4 (mod.) 10 g of soil is mixed with 50 mL of 0.01M CaCl <sub>2</sub> and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM Schedule B(3).
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl <sub>2</sub> ) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl <sub>2</sub> which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	SOIL	In house: Referenced to USEPA SW846, Method 3060. Hexavalent chromium is extracted by alkaline digestion. The digest is determined by photometrically by automatic discrete analyser, following pH adjustment. The instrument uses colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM Schedule B(3)
Total Cyanide by Segmented Flow Analyser	EK026SF	SOIL	In house: Referenced to APHA 4500-CN C / ASTM D7511 / ISO 14403. Caustic leachates of soil samples are introduced into an automated segmented flow analyser. Complex bound cyanide is decomposed in a continuously flowing stream, at a pH of 3.8, by the effect of UV light. A UV-B lamp (312 nm) and a decomposition spiral of borosilicate glass are used to filter out UV light with a wavelength of less than 290 nm thus preventing the conversion of thiocyanate into cyanide. The hydrogen cyanide present at a pH of 3.8 is separated by gas dialysis. The hydrogen cyanide is then determined photometrically, based on the reaction of cyanide with chloramine-T to form cyanogen chloride. This then reacts with 4-pyridine carboxylic acid and 1,3-dimethylbarbituric acid to give a red colour which is measured at 600 nm. This method is compliant with NEPM Schedule B(3).
Total Fluoride	EK040T	SOIL	(In-house) Total fluoride is determined by ion specific electrode (ISE) in a solution obtained after a Sodium Carbonate / Potassium Carbonate fusion dissolution.
PCB - VIC EPA 448.3 Screen	EP066-EM	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071-EM	SOIL	In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40.
Volatile Organic Compounds - Ultra-trace	EP074-UT	SOIL	In house: Referenced to USEPA SW 846 - 8260 Extracts are analysed by Purge and Trap, Capillary GC/MS in partial SIM/Scan mode. Quantification is by comparison against an established multi-point calibration curves. This method is compliant with NEPM Schedule B(3).



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

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



<i>Preparation Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	SOIL	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.
Preparation for PFAS in water.	EP231-PR	WATER	Method presumes direct injection without workup. Preparation includes addition of internal standard and surrogate, and filtration prior to analysis.