

# TBM Spoil Waste Categorisation Report

<b>TBM Spoil Waste Cat Report No:</b>	<b>B02.0220220426123246_02</b>	<b>This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001_01</u></b>
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## 1. Motherhub Summary

Source TBM/Bin at Pivot	1	Source Geological Domain	4
Approx. Source Tunnel Chainage From	430	Approx. Source Tunnel Chainage To	436
Approx. Rings From	182	Approx. Rings To	185
Foaming Agent	TamSoil 287AC	Water Source	Potable (City West Water)
For BSF Holding Bay No:	B02.02	Start of Filling From (Time / date)	12/04/2022
Tonnes Put in Holding Bay No:	8112.22	Finish of Filling (Time / Date)	14/04/2022
Classified Volume (LCM)	4000	Spoil Classification Decision	NPIW Containment
Sampling Ratio (samples per LCM)	1: 133.33	Approx. Bank Cubic Meters (BCM)	1146.81

## 2. Agon Spoil Classification Decision

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

## 3. Agon Spoil Classification Assessment

### 3.1 Applicable Samples

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

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

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Table 3.1 - Applicable Sample ID's

*Table 3.1 - 1 Applicable Sample ID's*

Applicable Spoil Sample ID's		
SX_OB_20220412_17_17_SS_Primary_EUF	SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220413_16_18_SS_Primary_EUF
SX_OB_20220412_17_18_SS_Duplicate_EUF	SX_OB_20220413_08_15_SS_Primary_ALS	SX_OB_20220413_16_20_SS_Duplicate_EUF
SX_OB_20220412_17_19_SS_Triplicate_ALS	SX_OB_20220413_08_17_SS_Duplicate_ALS	SX_OB_20220413_16_22_SS_Triplicate_ALS
SX_OB_20220412_17_22_SS_Primary_ALS	SX_OB_20220413_08_18_SS_Triplicate_EUF	SX_OB_20220413_16_24_SS_Primary_ALS
SX_OB_20220412_17_27_SS_Primary_ALS	SX_OB_20220413_08_25_SS_Primary_EUF	SX_OB_20220413_20_16_SS_Primary_ALS
SX_OB_20220412_19_56_SS_Primary_EUF	SX_OB_20220413_08_29_SS_Primary_ALS	SX_OB_20220413_20_17_SS_Primary_EUF
SX_OB_20220412_20_04_SS_Primary_ALS	SX_OB_20220413_12_43_SS_Primary_EUF	SX_OB_20220414_00_02_SS_Primary_ALS
SX_OB_20220412_23_59_SS_Primary_ALS	SX_OB_20220413_12_52_SS_Primary_ALS	SX_OB_20220414_00_06_SS_Primary_EUF
SX_OB_20220413_00_04_SS_Primary_EUF	SX_OB_20220413_12_56_SS_Primary_EUF	SX_OB_20220414_03_53_SS_Primary_ALS
SX_OB_20220413_03_56_SS_Primary_EUF	SX_OB_20220413_16_10_SS_Primary_ALS	SX_OB_20220414_04_02_SS_Primary_EUF
Total Sample Numbers	30	Ratio Acceptable
Primary Sample Numbers	24	Yes
Classified Volume (LCM)	4000 m <sup>3</sup>	
Volume: Sample Number Ratio (Samples per LCM)	1: 133.33	

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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>	
<b>Notes:</b>	
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	30*	24	1: 133.33	30	25	40.57	44.56	69	20	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Chromium (Hexavalent)	mg/kg	1	30*	24	1: 133.33	5	<1.0	1.28	N/A	1.6	1	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Nickel	mg/kg	5	30*	24	1: 133.33	30	117	188.5	204.7	330	60	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Fluoride	mg/kg	100	30*	24	1: 133.33	13	100	249.2	N/A	620	450	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)

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

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

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

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

PFAS Test Results											
Chemical	Unit	LOR	No. of Samples	No. of primary samples	No > LOR	Min	Mean	95% UCL on Mean	Max	Upper Limiting Criteria for NPIW Containment	Spoil Category for PFAS
Total PFAS Concentrations											
Total PFOS	ug/kg	5	30*	24	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFOA	ug/kg	5	30*	24	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFHxS	ug/kg	5	30*	24	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
ASLP (pH= 5) PFAS Concentrations											
PFOA	ug/L	0.01	30*	24	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS+PFHxS	ug/L	0.01	30*	24	0	N/A	N/A	N/A	<0.01	7	NPIW-Containment
ASLP (pH= 7) PFAS Concentrations											
PFOA	ug/L	0.01	30*	24	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS+PFHxS	ug/L	0.01	30*	24	0	N/A	N/A	N/A	<0.01	7	NPIW-Containment

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



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## 3.5 Waste Classification for Spoil Not Suitable for Containment Cell

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

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

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

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

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

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

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

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

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Table 3.5 - 3 PFAS Parameter Concentrations and Waste Classifications

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

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## 4. Comments and Limitations

Comments and Limitations	
1.	<p>Naturally Occurring Chemicals listed in IWRG 621.1 that are within the Background range despite being reported at concentrations that would otherwise categorise the material as PIW:</p> <ol style="list-style-type: none"> <li>1. Technical discussion around the naturally occurring metal concentrations found in soils beneath the WGTP is detailed in <i>Golder (2017b) – Technical Report B, Appendix E – Environmental characterisation of spoil (natural soil and rock)</i>. The report indicates that elevated metals (including arsenic, nickel, copper, chromium (CrVI), zinc and mercury) were considered to be associated with natural enrichment instead of anthropogenic contamination.               <ol style="list-style-type: none"> <li>a. <b>Arsenic</b> – <i>Golder (2017b) – Technical Report B, Appendix E section 6.2 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 section 6.3 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

3. Previous reviews of the presence of Fluoride in soil data outlined on the SAQP (Rev 5) were undertaken by AJJV (2019). The AJJV review of the consolidated data set identified:

Samples which reported elevated fluoride concentrations were found to be within the range the ambient background from the parent or similar material in the Victorian Soil Database:

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	<p style="margin-left: 40px;">i. Newer Volcanics Group – Maximum 820 mg/kg ii. Older Volcanics – Maximum 600 mg/kg iii. Sub-Basaltic Alluvium – Maximum 240 mg/kg</p> <p style="margin-left: 40px;">In addition, the 95% UCLs calculated for Newer Volcanics Group and Older Volcanics, was 322.7 mg/kg and 225.1 mg/kg respectively, both of these values are below the 450mg/kg upper limit for spoil to be disposed of to the containment cell.</p> <p>A review of the Agon data for spoil reported in this data set shows:</p> <ul style="list-style-type: none"> <li>• A similar ratio of test results &gt; LOR compared to the overall data set;</li> <li>• If a ½ LOR is substituted for results reported as &lt;LOR (of 100mg/kg), then like the AJJV 95% UCL, the calculation is less than the 450mg/kg upper limit for spoil to be disposed of to the containment cell.</li> </ul> <p>The results also show that there are no synthetic compounds reported above the laboratory LOR, another indication that anthropogenic contamination is not present.</p>
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”. 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.
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.



# TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	B02.0220220426123246_02	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001_01</u>
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## 5. Attachments

ATTACHMENT A: TABULATED RESULTS

ATTACHMENT B: 95% UCL AVE CALCULATIONS

ATTACHMENT C: LABORATORY CERTIFICATES

# TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	B02.0220220426123246_02	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001_01</u>
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ATTACHMENT A: TABULATED RESULTS

	Metals									
	Arsenic	Cadmium	Copper	Chromium (III+VI)	Chromium (hexavalent)	Lead	Mercury	Molybdenum	Nickel	Selenium
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	0.4	5	5	1	5	0.1	5	5	2
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold										
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold										
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold										
EPA PFAS Classification - Tunnel Zone - No option for disposal threshold										
EPA Victoria IWRG621 Category B Leached Upper Limits										
EPA Victoria IWRG621 Category B Upper Limits	2,000	400	20,000		2,000	6,000	300	4,000	12,000	200
EPA Victoria IWRG621 Category C Leached Upper Limits										
EPA Victoria IWRG621 Category C Upper Limits	500	100	5,000		500	1,500	75	1,000	3,000	50
EPA Victoria IWRG621 Fill Upper Limits	20	3	100		1	300	1	40	60	10

Location Code	Field ID	Sample Code	Date	Lab Report Number	Lab Name	Sample Type	Parent Sample	Arsenic	Cadmium	Copper	Chromium (III+VI)	Chromium (hexavalent)	Lead	Mercury	Molybdenum	Nickel	Selenium
B02.02	SX_OB_20220412_17_17_SS_Pri	M22-Ap0027889	12/04/2022	879810	MGT	Normal		46	<0.4	63	130	<1	5.2	<0.1	<5	190	<2
B02.02	SX_OB_20220412_17_17_SS_Pri	M22-Ap0027896	12/04/2022	879810	MGT	Normal											
B02.02	SX_OB_20220412_17_17_SS_Pri	M22-Ap0027903	12/04/2022	879810	MGT	Normal											
B02.02	SX_OB_20220412_17_18_SS_Du	M22-Ap0027890	12/04/2022	879810	MGT	Field_D	M22-Ap0027889	51	<0.4	66	140	1.4	5.0	<0.1	<5	210	<2
B02.02	SX_OB_20220412_17_18_SS_Du	M22-Ap0027897	12/04/2022	879810	MGT	Field_D	M22-Ap0027896										
B02.02	SX_OB_20220412_17_18_SS_Du	M22-Ap0027904	12/04/2022	879810	MGT	Field_D	M22-Ap0027903										
B02.02	SX_OB_20220412_17_19_SS_Tri	EM2206764006	12/04/2022	EM2206764	ALSE-Melbourne	Interlab_D	M22-Ap0027889	29	<1	47	97	<1.0	<5	<0.1	<5	179	<5
B02.02	SX_OB_20220412_17_19_SS_Tri	EM2206764015	12/04/2022	EM2206764	ALSE-Melbourne	Interlab_D	M22-Ap0027903										
B02.02	SX_OB_20220412_17_22_SS_Pri	EM2206764007	12/04/2022	EM2206764	ALSE-Melbourne	Normal		28	<1	65	100	<1.0	<5	<0.1	<5	188	<5
B02.02	SX_OB_20220412_17_22_SS_Pri	EM2206764016	12/04/2022	EM2206764	ALSE-Melbourne	Normal											
B02.02	SX_OB_20220412_17_27_SS_Pri	EM2206764008	12/04/2022	EM2206764	ALSE-Melbourne	Normal		37	2	68	144	<1.0	<5	<0.1	<5	192	<5
B02.02	SX_OB_20220412_17_27_SS_Pri	EM2206764017	12/04/2022	EM2206764	ALSE-Melbourne	Normal											
B02.02	SX_OB_20220412_19_56_SS_Pri	M22-Ap0027891	12/04/2022	879810	MGT	Normal		63	<0.4	92	260	<1	<5	<0.1	<5	330	<2
B02.02	SX_OB_20220412_19_56_SS_Pri	M22-Ap0027898	12/04/2022	879810	MGT	Normal											
B02.02	SX_OB_20220412_19_56_SS_Pri	M22-Ap0027905	12/04/2022	879810	MGT	Normal											
B02.02	SX_OB_20220412_20_04_SS_Pri	EM2206764009	12/04/2022	EM2206764	ALSE-Melbourne	Normal		30	<1	60	123	<1.0	<5	<0.1	<5	176	<5
B02.02	SX_OB_20220412_20_04_SS_Pri	EM2206764018	12/04/2022	EM2206764	ALSE-Melbourne	Normal											
B02.02	SX_OB_20220412_20_04_SS_Pri	EM2206764020	12/04/2022	EM2206764	ALSE-Melbourne	Normal											
B02.02	SX_OB_20220412_23_59_SS_Pri	EM2206764010	12/04/2022	EM2206764	ALSE-Melbourne	Normal		43	<1	64	121	<1.0	<5	<0.1	<5	139	<5
B02.02	SX_OB_20220412_23_59_SS_Pri	EM2206764019	12/04/2022	EM2206764	ALSE-Melbourne	Normal											
B02.02	SX_OB_20220413_00_04_SS_Pri	M22-Ap0027892	13/04/2022	879810	MGT	Normal		49	<0.4	94	130	<1	6.1	<0.1	<5	260	<2
B02.02	SX_OB_20220413_00_04_SS_Pri	M22-Ap0027899	13/04/2022	879810	MGT	Normal											
B02.02	SX_OB_20220413_00_04_SS_Pri	M22-Ap0027906	13/04/2022	879810	MGT	Normal											
B02.02	SX_OB_20220413_03_56_SS_Pri	M22-Ap0027893	13/04/2022	879810	MGT	Normal		44	<0.4	64	110	<1	<5	<0.1	<5	200	<2
B02.02	SX_OB_20220413_03_56_SS_Pri	M22-Ap0027900	13/04/2022	879810	MGT	Normal											
B02.02	SX_OB_20220413_03_56_SS_Pri	M22-Ap0027907	13/04/2022	879810	MGT	Normal											
B02.02	SX_OB_20220413_04_01_SS_Pri	EM2206764011	12/04/2022	EM2206764	ALSE-Melbourne	Normal		29	<1	74	102	<1.0	<5	<0.1	<5	215	<5
B02.02	SX_OB_20220413_08_15_SS_Pri	EM2206896005	14/04/2022	EM2206896	ALSE-Melbourne	Normal		30	<1	43	86	<1.0	<5	<0.1	<5	138	<5
B02.02	SX_OB_20220413_08_15_SS_Pri	EM2206896017	14/04/2022	EM2206896	ALSE-Melbourne	Normal											
B02.02	SX_OB_20220413_08_17_SS_Du	EM2206896007	14/04/2022	EM2206896	ALSE-Melbourne	Field_D	EM2206896005	39	<1	46	68	<1.0	<5	<0.1	<5	174	<5
B02.02	SX_OB_20220413_08_17_SS_Du	EM2206896019	14/04/2022	EM2206896	ALSE-Melbourne	Field_D	EM2206896017										
B02.02	SX_OB_20220413_08_18_SS_Tri	M22-Ap0030620	13/04/2022	880173	MGT	Interlab_D	EM2206896005	55	<0.4	77	140	<1	5.2	<0.1	<5	240	<2
B02.02	SX_OB_20220413_08_18_SS_Tri	M22-Ap0030631	13/04/2022	880173	MGT	Interlab_D	EM2206896005										
B02.02	SX_OB_20220413_08_18_SS_Tri	M22-Ap0030640	13/04/2022	880173	MGT	Interlab_D	EM2206896017										
B02.02	SX_OB_20220413_08_25_SS_Pri	M22-Ap0030616	13/04/2022	880173	MGT	Normal		36	<0.4	59	100	<1	<5	<0.1	<5	190	<2
B02.02	SX_OB_20220413_08_25_SS_Pri	M22-Ap0030627	13/04/2022	880173	MGT	Normal											
B02.02	SX_OB_20220413_08_25_SS_Pri	M22-Ap0030636	13/04/2022	880173	MGT	Normal											
B02.02	SX_OB_20220413_08_29_SS_Pri	EM2206896002	14/04/2022	EM2206896	ALSE-Melbourne	Normal		29	<1	48	71	<1.0	<5	<0.1	<5	150	<5
B02.02	SX_OB_20220413_08_29_SS_Pri	EM2206896014	14/04/2022	EM2206896	ALSE-Melbourne	Normal											
B02.02	SX_OB_20220413_12_43_SS_Pri	M22-Ap0030618	13/04/2022	880173	MGT	Normal		47	<0.4	100	150	<1	5.4	<0.1	<5	320	<2
B02.02	SX_OB_20220413_12_43_SS_Pri	M22-Ap0030629	13/04/2022	880173	MGT	Normal											
B02.02	SX_OB_20220413_12_43_SS_Pri	M22-Ap0030638	13/04/2022	880173	MGT	Normal											
B02.02	SX_OB_20220413_12_52_SS_Pri	EM2206896001	14/04/2022	EM2206896	ALSE-Melbourne	Normal		40	<1	45	94	1.1	<5	<0.1	<5	167	<5
B02.02	SX_OB_20220413_12_52_SS_Pri	EM2206896013	14/04/2022	EM2206896	ALSE-Melbourne	Normal											
B02.02	SX_OB_20220413_12_56_SS_Pri	M22-Ap0030617	13/04/2022	880173	MGT	Normal		69	<0.4	69	160	<1	<5	<0.1	<5	220	<2
B02.02	SX_OB_20220413_12_56_SS_Pri	M22-Ap0030628	13/04/2022	880173	MGT	Normal											
B02.02	SX_OB_20220413_12_56_SS_Pri	M22-Ap0030637	13/04/2022	880173	MGT	Normal											
B02.02	SX_OB_20220413_16_10_SS_Pri	EM2206896004	14/04/2022	EM2206896	ALSE-Melbourne	Normal		35	<1	48	95	<1.0	<5	<0.1	<5	150	<5
B02.02	SX_OB_20220413_16_10_SS_Pri	EM2206896016	14/04/2022	EM2206896	ALSE-Melbourne	Normal											
B02.02	SX_OB_20220413_16_18_SS_Pri	M22-Ap0030619	13/04/2022	880173	MGT	Normal		58	<0.4	72	140	1.6	5.9	<0.1	<5	220	<2
B02.02	SX_OB_20220413_16_18_SS_Pri	M22-Ap0030630	13/04/2022	880173	MGT	Normal											
B02.02	SX_OB_20220413_16_18_SS_Pri	M22-Ap0030639	13/04/2022	880173	MGT	Normal											
B02.02	SX_OB_20220413_16_20_SS_Du	M22-Ap0030621	13/04/2022	880173	MGT	Field_D	M22-Ap0030619	65	<0.4	55	110	<1	5.3	<0.1	<5	160	<2

								Metals									
								Arsenic	Cadmium	Copper	Chromium (III+VI)	Chromium (hexavalent)	Lead	Mercury	Molybdenum	Nickel	Selenium
								mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
B02.02	SX_OB_20220413_16_20_SS_Du	M22-Ap0030632	13/04/2022	880173	MGT	Field_D	M22-Ap0030630										
B02.02	SX_OB_20220413_16_20_SS_Du	M22-Ap0030641	13/04/2022	880173	MGT	Field_D	M22-Ap0030639										
B02.02	SX_OB_20220413_16_22_SS_Tri	EM2206896006	14/04/2022	EM2206896	ALSE-Melbourne	Interlab_D	M22-Ap0030619	30	<1	42	78	<1.0	<5	<0.1	<5	132	<5
B02.02	SX_OB_20220413_16_22_SS_Tri	EM2206896018	14/04/2022	EM2206896	ALSE-Melbourne	Interlab_D	M22-Ap0030639										
B02.02	SX_OB_20220413_16_24_SS_Pri	EM2206896003	14/04/2022	EM2206896	ALSE-Melbourne	Normal		25	<1	45	69	<1.0	6	<0.1	<5	147	<5
B02.02	SX_OB_20220413_16_24_SS_Pri	EM2206896015	14/04/2022	EM2206896	ALSE-Melbourne	Normal											
B02.02	SX_OB_20220413_20_16_SS_Pri	EM2206896010	14/04/2022	EM2206896	ALSE-Melbourne	Normal		26	<1	54	82	<1.0	<5	<0.1	<5	161	<5
B02.02	SX_OB_20220413_20_16_SS_Pri	EM2206896020	14/04/2022	EM2206896	ALSE-Melbourne	Normal											
B02.02	SX_OB_20220413_20_17_SS_Pri	M22-Ap0030624	13/04/2022	880173	MGT	Normal		36	<0.4	50	98	1.2	<5	<0.1	<5	160	<2
B02.02	SX_OB_20220413_20_17_SS_Pri	M22-Ap0030633	13/04/2022	880173	MGT	Normal											
B02.02	SX_OB_20220413_20_17_SS_Pri	M22-Ap0030642	13/04/2022	880173	MGT	Normal											
B02.02	SX_OB_20220414_00_02_SS_Pri	EM2206896011	14/04/2022	EM2206896	ALSE-Melbourne	Normal		25	<1	40	78	1.1	<5	<0.1	<5	150	<5
B02.02	SX_OB_20220414_00_02_SS_Pri	EM2206896021	14/04/2022	EM2206896	ALSE-Melbourne	Normal											
B02.02	SX_OB_20220414_00_06_SS_Pri	M22-Ap0030625	14/04/2022	880173	MGT	Normal		58	<0.4	65	120	<1	5.9	<0.1	<5	190	<2
B02.02	SX_OB_20220414_00_06_SS_Pri	M22-Ap0030634	14/04/2022	880173	MGT	Normal											
B02.02	SX_OB_20220414_00_06_SS_Pri	M22-Ap0030643	14/04/2022	880173	MGT	Normal											
B02.02	SX_OB_20220414_03_53_SS_Pri	EM2206896012	14/04/2022	EM2206896	ALSE-Melbourne	Normal		32	<1	38	87	<1.0	<5	<0.1	<5	117	<5
B02.02	SX_OB_20220414_03_53_SS_Pri	EM2206896022	14/04/2022	EM2206896	ALSE-Melbourne	Normal											
B02.02	SX_OB_20220414_04_02_SS_Pri	M22-Ap0030626	14/04/2022	880173	MGT	Normal		33	<0.4	60	140	<1	<5	<0.1	<5	190	<2
B02.02	SX_OB_20220414_04_02_SS_Pri	M22-Ap0030635	14/04/2022	880173	MGT	Normal											
B02.02	SX_OB_20220414_04_02_SS_Pri	M22-Ap0030644	14/04/2022	880173	MGT	Normal											



		PAH																						
		Silver	Tin	Zinc	PAHs (Vic EPA List)	Benzo(b+f+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Half)	Benzo(e) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
B02.02	SX_OB_20220413_16_20_SS_Du																							
B02.02	SX_OB_20220413_16_20_SS_Du																							
B02.02	SX_OB_20220413_16_22_SS_Tri	<2	<10	77	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220413_16_22_SS_Tri																							
B02.02	SX_OB_20220413_16_24_SS_Pri	<2	<10	85	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220413_16_24_SS_Pri																							
B02.02	SX_OB_20220413_20_16_SS_Pri	<2	<10	95	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220413_20_16_SS_Pri																							
B02.02	SX_OB_20220413_20_17_SS_Pri	<2	<10	91	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220413_20_17_SS_Pri																							
B02.02	SX_OB_20220413_20_17_SS_Pri																							
B02.02	SX_OB_20220414_00_02_SS_Pri	<2	<10	74	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220414_00_02_SS_Pri																							
B02.02	SX_OB_20220414_00_06_SS_Pri	<2	<10	110	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220414_00_06_SS_Pri																							
B02.02	SX_OB_20220414_00_06_SS_Pri																							
B02.02	SX_OB_20220414_03_53_SS_Pri	<2	<10	70	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220414_03_53_SS_Pri																							
B02.02	SX_OB_20220414_04_02_SS_Pri	<2	<10	110	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220414_04_02_SS_Pri																							
B02.02	SX_OB_20220414_04_02_SS_Pri																							



		BTEX							TRH							TPH								
		Pyrene	PAHs (Sum of total)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene Total	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	C6-C9	C10-C14	C15-C28	C29-C36	F-C10-C36 (Sum of total)	Aldrin	Dieldrin	Aldrin + Dieldrin
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
B02.02	SX_OB_20220413_16_20_SS_Du																							
B02.02	SX_OB_20220413_16_20_SS_Du																							
B02.02	SX_OB_20220413_16_22_SS_Tri	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05	<0.30
B02.02	SX_OB_20220413_16_22_SS_Tri																							
B02.02	SX_OB_20220413_16_24_SS_Pri	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05	<0.30
B02.02	SX_OB_20220413_16_24_SS_Pri																							
B02.02	SX_OB_20220413_20_16_SS_Pri	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05	<0.30
B02.02	SX_OB_20220413_20_16_SS_Pri																							
B02.02	SX_OB_20220413_20_17_SS_Pri	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05	<0.05
B02.02	SX_OB_20220413_20_17_SS_Pri																							
B02.02	SX_OB_20220413_20_17_SS_Pri																							
B02.02	SX_OB_20220414_00_02_SS_Pri	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05	<0.30
B02.02	SX_OB_20220414_00_02_SS_Pri																							
B02.02	SX_OB_20220414_00_06_SS_Pri	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05	<0.05
B02.02	SX_OB_20220414_00_06_SS_Pri																							
B02.02	SX_OB_20220414_00_06_SS_Pri																							
B02.02	SX_OB_20220414_03_53_SS_Pri	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05	<0.30
B02.02	SX_OB_20220414_03_53_SS_Pri																							
B02.02	SX_OB_20220414_04_02_SS_Pri	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05	<0.05
B02.02	SX_OB_20220414_04_02_SS_Pri																							
B02.02	SX_OB_20220414_04_02_SS_Pri																							





		Organochlorine Pesticides																						
		DDD	DDT	4,4-DDE	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endrin	Endrin ketone	Endrin aldehyde	Endosulfan sulphate	Chlordane	Chlordane (cis)	Chlordane (trans)	Hexachlorobenzene	Heptachlor	Heptachlor epoxide	p-BHC	p-BHC	p-BHC	p-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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
B02.02	SX_OB_20220413_16_20_SS_Du																							
B02.02	SX_OB_20220413_16_20_SS_Du																							
B02.02	SX_OB_20220413_16_22_SS_Tri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10
B02.02	SX_OB_20220413_16_22_SS_Tri																							
B02.02	SX_OB_20220413_16_24_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10
B02.02	SX_OB_20220413_16_24_SS_Pri																							
B02.02	SX_OB_20220413_20_16_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10
B02.02	SX_OB_20220413_20_16_SS_Pri																							
B02.02	SX_OB_20220413_20_17_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1
B02.02	SX_OB_20220413_20_17_SS_Pri																							
B02.02	SX_OB_20220413_20_17_SS_Pri																							
B02.02	SX_OB_20220414_00_02_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10
B02.02	SX_OB_20220414_00_02_SS_Pri																							
B02.02	SX_OB_20220414_00_06_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1
B02.02	SX_OB_20220414_00_06_SS_Pri																							
B02.02	SX_OB_20220414_00_06_SS_Pri																							
B02.02	SX_OB_20220414_03_53_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10
B02.02	SX_OB_20220414_03_53_SS_Pri																							
B02.02	SX_OB_20220414_04_02_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1
B02.02	SX_OB_20220414_04_02_SS_Pri																							
B02.02	SX_OB_20220414_04_02_SS_Pri																							



		Phenols																					
	Other organochlorine pesticides EPAVIC	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol	4-chloro-3-methylphenol	Pentachlorophenol	2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4,6-Dinitro-2-methylphenol	Tetrachlorophenols	2,3,5,6-Tetrachlorophenol	Cresol Total	4,6-Dinitro-o-cyclohexyl phenol	Phenols (halogenated) EPAVIC	Phenols (non-halogenated) EPAVIC	2,4-Dimethylphenol	2-Methylphenol	2-Nitrophenol	2,4-Dinitrophenol	3&4-Methylphenol (m&p-cresol)	4-Nitrophenol	Dinoseb
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
B02.02	SX_OB_20220413_16_20_SS_Du																						
B02.02	SX_OB_20220413_16_20_SS_Du																						
B02.02	SX_OB_20220413_16_22_SS_Tri	<0.03	<0.50	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5	<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20
B02.02	SX_OB_20220413_16_22_SS_Tri																						
B02.02	SX_OB_20220413_16_24_SS_Pri	<0.03	<0.50	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5	<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20
B02.02	SX_OB_20220413_16_24_SS_Pri																						
B02.02	SX_OB_20220413_20_16_SS_Pri	<0.03	<0.50	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5	<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20
B02.02	SX_OB_20220413_20_16_SS_Pri																						
B02.02	SX_OB_20220413_20_17_SS_Pri	<0.1	<0.5	<0.5	<1	<1	<0.5	<1	<1	<5	<10		<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5	<20
B02.02	SX_OB_20220413_20_17_SS_Pri																						
B02.02	SX_OB_20220413_20_17_SS_Pri																						
B02.02	SX_OB_20220414_00_02_SS_Pri	<0.03	<0.50	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5	<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20
B02.02	SX_OB_20220414_00_02_SS_Pri																						
B02.02	SX_OB_20220414_00_06_SS_Pri	<0.1	<0.5	<0.5	<1	<1	<0.5	<1	<1	<5	<10		<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5	<20
B02.02	SX_OB_20220414_00_06_SS_Pri																						
B02.02	SX_OB_20220414_00_06_SS_Pri																						
B02.02	SX_OB_20220414_03_53_SS_Pri	<0.03	<0.50	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5	<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20
B02.02	SX_OB_20220414_03_53_SS_Pri																						
B02.02	SX_OB_20220414_04_02_SS_Pri	<0.1	<0.5	<0.5	<1	<1	<0.5	<1	<1	<5	<10		<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5	<20
B02.02	SX_OB_20220414_04_02_SS_Pri																						
B02.02	SX_OB_20220414_04_02_SS_Pri																						



		Phenol mg/kg	Phenols (Total Halogenated) mg/kg	Phenols (Total Non Halogenated) mg/kg	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-perfluorooctanesulfonamide acetic acid (NEFOSAA)		N-ethylperfluorooctanesulfonamide ethanol (NEFOSE)		N-Methyl perfluorooctane sulfonamide (NMeFOSA)		N-methylperfluorooctane sulfonamide acetic acid (NMeFOSAA)		N-Methylperfluorooctanesulfonamide ethanol (NMeFOSE)		
					mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L
B02.02	SX_OB_20220413_16_20_SS_Du				<0.00001		<0.00001		<0.00005		<0.00001		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
B02.02	SX_OB_20220413_16_20_SS_Du				<0.00001		<0.00001		<0.00005		<0.00001		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
B02.02	SX_OB_20220413_16_22_SS_Tri	<1			<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	
B02.02	SX_OB_20220413_16_22_SS_Tri				<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00002		<0.00005		<0.00005		<0.00002		<0.00005		<0.00005
B02.02	SX_OB_20220413_16_24_SS_Pri	<1			<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	
B02.02	SX_OB_20220413_16_24_SS_Pri				<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00002		<0.00005		<0.00005		<0.00002		<0.00005		<0.00005
B02.02	SX_OB_20220413_20_16_SS_Pri	<1			<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	
B02.02	SX_OB_20220413_20_16_SS_Pri				<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00002		<0.00005		<0.00005		<0.00002		<0.00005		<0.00005
B02.02	SX_OB_20220413_20_17_SS_Pri	<0.5	<1	<20		<0.005		<0.005		<0.01		<0.005		<0.005		<0.01		<0.005		<0.005		<0.01		<0.005	
B02.02	SX_OB_20220413_20_17_SS_Pri				<0.00001		<0.00001		<0.00005		<0.00001		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
B02.02	SX_OB_20220413_20_17_SS_Pri				<0.00001		<0.00001		<0.00005		<0.00001		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
B02.02	SX_OB_20220414_00_02_SS_Pri	<1			<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	
B02.02	SX_OB_20220414_00_02_SS_Pri				<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00002		<0.00005		<0.00005		<0.00002		<0.00005		<0.00005
B02.02	SX_OB_20220414_00_06_SS_Pri	<0.5	<1	<20		<0.005		<0.005		<0.01		<0.005		<0.005		<0.01		<0.005		<0.005		<0.01		<0.005	
B02.02	SX_OB_20220414_00_06_SS_Pri				<0.00001		<0.00001		<0.00005		<0.00001		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
B02.02	SX_OB_20220414_00_06_SS_Pri				<0.00001		<0.00001		<0.00005		<0.00001		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
B02.02	SX_OB_20220414_03_53_SS_Pri	<1			<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	
B02.02	SX_OB_20220414_03_53_SS_Pri				<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00002		<0.00005		<0.00005		<0.00002		<0.00005		<0.00005
B02.02	SX_OB_20220414_04_02_SS_Pri	<0.5	<1	<20		<0.005		<0.005		<0.01		<0.005		<0.005		<0.01		<0.005		<0.005		<0.01		<0.005	
B02.02	SX_OB_20220414_04_02_SS_Pri				<0.00001		<0.00001		<0.00005		<0.00001		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
B02.02	SX_OB_20220414_04_02_SS_Pri				<0.00001		<0.00001		<0.00005		<0.00001		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005









		Perfluorooctanoic acid (PFOSA)	Perfluoropentanoic acid (PFPeA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropanesulfonic acid (PFPrS)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorooctanesulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
		mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L
B02.02	SX_OB_20220413_16_20_SS_Du		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
B02.02	SX_OB_20220413_16_20_SS_Du		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
B02.02	SX_OB_20220413_16_22_SS_Tri	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00005	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00001
B02.02	SX_OB_20220413_16_22_SS_Tri		<0.00002	<0.00002			<0.00005	<0.00002	<0.00002	<0.00001	<0.00002	<0.00001	<0.00001
B02.02	SX_OB_20220413_16_24_SS_Pri	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00005	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00001
B02.02	SX_OB_20220413_16_24_SS_Pri		<0.00002	<0.00002			<0.00005	<0.00002	<0.00002	<0.00001	<0.00002	<0.00001	<0.00001
B02.02	SX_OB_20220413_20_16_SS_Pri	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00005	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00001
B02.02	SX_OB_20220413_20_16_SS_Pri		<0.00002	<0.00002			<0.00005	<0.00002	<0.00002	<0.00001	<0.00002	<0.00001	<0.00001
B02.02	SX_OB_20220413_20_17_SS_Pri	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005	<0.005
B02.02	SX_OB_20220413_20_17_SS_Pri		<0.00001	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	<0.00001
B02.02	SX_OB_20220413_20_17_SS_Pri		<0.00001	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	<0.00001
B02.02	SX_OB_20220414_00_02_SS_Pri	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00005	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00001
B02.02	SX_OB_20220414_00_02_SS_Pri		<0.00002	<0.00002			<0.00005	<0.00002	<0.00002	<0.00001	<0.00002	<0.00001	<0.00001
B02.02	SX_OB_20220414_00_06_SS_Pri	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005	<0.005
B02.02	SX_OB_20220414_00_06_SS_Pri		<0.00001	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	<0.00001
B02.02	SX_OB_20220414_00_06_SS_Pri		<0.00001	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	<0.00001
B02.02	SX_OB_20220414_03_53_SS_Pri	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00005	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00001
B02.02	SX_OB_20220414_03_53_SS_Pri		<0.00002	<0.00002			<0.00005	<0.00002	<0.00002	<0.00001	<0.00002	<0.00001	<0.00001
B02.02	SX_OB_20220414_04_02_SS_Pri	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005	<0.005
B02.02	SX_OB_20220414_04_02_SS_Pri		<0.00001	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	<0.00001
B02.02	SX_OB_20220414_04_02_SS_Pri		<0.00001	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	<0.00001



		Chlorinated Hydrocarbons																						
		Sum of PFAS mg/L	Sum of PFAS mg/kg	1,1-dichloroethane mg/kg	1,1-dichloroethene mg/kg	1,2,3-trichloropropane mg/kg	1,2-dichloroethane mg/kg	1,2-dichloropropane mg/kg	1,3-dichloropropane mg/kg	Bromochloromethane mg/kg	1,1,1,2-tetrachloroethane mg/kg	Bromodichloromethane mg/kg	1,1,1-trichloroethane mg/kg	Chloroform mg/kg	1,1,1,2-tetrachloroethane mg/kg	Chloromethane mg/kg	cis-1,3-dichloropropene mg/kg	Dibromomethane mg/kg	Dichloromethane mg/kg	Hexachlorobutadiene mg/kg	Other chlorinated hydrocarbons EPAVc mg/kg	Trichloroethene mg/kg	Chlorinated hydrocarbons EPAVc mg/kg	cis-1,2-dichloroethene mg/kg
B02.02	SX_OB_20220413_16_20_SS_Du	<0.0001																						
B02.02	SX_OB_20220413_16_20_SS_Du	<0.0001																						
B02.02	SX_OB_20220413_16_22_SS_Tri	<0.00010	<0.0500		<0.50		<0.50				<0.50		<0.50	<0.50	<0.50				<0.5	<0.50	<0.50	<0.50	<0.50	<0.50
B02.02	SX_OB_20220413_16_22_SS_Tri	<0.00001																						
B02.02	SX_OB_20220413_16_24_SS_Pri	<0.00010	<0.0500		<0.50		<0.50				<0.50		<0.50	<0.50	<0.50				<0.5	<0.50	<0.50	<0.50	<0.50	<0.50
B02.02	SX_OB_20220413_16_24_SS_Pri	<0.00001																						
B02.02	SX_OB_20220413_20_16_SS_Pri	<0.00010	<0.0500		<0.50		<0.50				<0.50		<0.50	<0.50	<0.50				<0.5	<0.50	<0.50	<0.50	<0.50	<0.50
B02.02	SX_OB_20220413_20_16_SS_Pri	<0.00001																						
B02.02	SX_OB_20220413_20_17_SS_Pri		<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220413_20_17_SS_Pri	<0.0001																						
B02.02	SX_OB_20220413_20_17_SS_Pri	<0.0001																						
B02.02	SX_OB_20220414_00_02_SS_Pri	<0.00010	<0.0500		<0.50		<0.50				<0.50		<0.50	<0.50	<0.50				<0.5	<0.50	<0.50	<0.50	<0.50	<0.50
B02.02	SX_OB_20220414_00_02_SS_Pri	<0.00001																						
B02.02	SX_OB_20220414_00_06_SS_Pri		<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220414_00_06_SS_Pri	<0.0001																						
B02.02	SX_OB_20220414_00_06_SS_Pri	<0.0001																						
B02.02	SX_OB_20220414_03_53_SS_Pri	<0.00010	<0.0500		<0.50		<0.50				<0.50		<0.50	<0.50	<0.50				<0.5	<0.50	<0.50	<0.50	<0.50	<0.50
B02.02	SX_OB_20220414_03_53_SS_Pri	<0.00001																						
B02.02	SX_OB_20220414_04_02_SS_Pri		<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220414_04_02_SS_Pri	<0.0001																						
B02.02	SX_OB_20220414_04_02_SS_Pri	<0.0001																						



											NA			PCBs										
		1,1,2-trichloroethane	trans-1,3-dichloropropene	Vinyl chloride	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	trans-1,2-dichloroethene	Tetrachloroethene	Sum of WA DWER PFAS (n=10)*	Moisture Content	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1221	Arochlor 1260	Arochlor 1016	PCBs (Sum of total)	pH (after HCL)	pH (Final)	pH (Initial)	
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	UG/KG	µg/L	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	
B02.02	SX_OB_20220413_16_20_SS_Du										<0.05												5.3	
B02.02	SX_OB_20220413_16_20_SS_Du										<0.05												8.7	
B02.02	SX_OB_20220413_16_22_SS_Tri	<0.50		<0.50		<0.50			<0.50	<0.50	<10.0	<0.05	29.2								<0.1	1.0	5.0	9.2
B02.02	SX_OB_20220413_16_22_SS_Tri										<0.01												9.7	
B02.02	SX_OB_20220413_16_24_SS_Pri	<0.50		<0.50		<0.50			<0.50	<0.50	<10.0	<0.05	32.4								<0.1	1.0	5.0	7.3
B02.02	SX_OB_20220413_16_24_SS_Pri										<0.01												9.5	
B02.02	SX_OB_20220413_20_16_SS_Pri	<0.50		<0.50		<0.50			<0.50	<0.50	<10.0	<0.05	32.4								<0.1	1.0	5.0	8.6
B02.02	SX_OB_20220413_20_16_SS_Pri										<0.01												9.5	
B02.02	SX_OB_20220413_20_17_SS_Pri	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				
B02.02	SX_OB_20220413_20_17_SS_Pri										<0.05												5.3	
B02.02	SX_OB_20220413_20_17_SS_Pri										<0.05												8.8	
B02.02	SX_OB_20220414_00_02_SS_Pri	<0.50		<0.50		<0.50			<0.50	<0.50	<10.0	<0.05	32.2								<0.1	1.0	5.0	9.1
B02.02	SX_OB_20220414_00_02_SS_Pri										<0.01												9.5	
B02.02	SX_OB_20220414_00_06_SS_Pri	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				
B02.02	SX_OB_20220414_00_06_SS_Pri										<0.05												5.4	
B02.02	SX_OB_20220414_00_06_SS_Pri										<0.05												8.7	
B02.02	SX_OB_20220414_03_53_SS_Pri	<0.50		<0.50		<0.50			<0.50	<0.50	<10.0	<0.05	30.2								<0.1	7.3	3.6	9.3
B02.02	SX_OB_20220414_03_53_SS_Pri										<0.01												9.8	
B02.02	SX_OB_20220414_04_02_SS_Pri	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				
B02.02	SX_OB_20220414_04_02_SS_Pri										<0.05												5.2	
B02.02	SX_OB_20220414_04_02_SS_Pri										<0.05												8.6	



		Inorganics				Halogenated Benzenes							Halogenated Hydrocarbons					MAH							
		pH of Leaching Fluid	pH (aqueous extract)	Fluoride	Moisture Content (dried @ 103°C)	Cyanide Total	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Bromobenzene	4-chlorotoluene	Chlorobenzene	Iodomethane	Bromomethane	1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Total MAH	Monocyclic aromatic hydrocarbons EPA/Vic	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	
				mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
B02.02	SX_OB_20220413_16_20_SS_Du	5.0	-																						
B02.02	SX_OB_20220413_16_20_SS_Du	6.4																							
B02.02	SX_OB_20220413_16_22_SS_Tri	5.0		<100		<5	<0.50	<0.50	<0.50			<0.50								<0.5		<0.5			
B02.02	SX_OB_20220413_16_22_SS_Tri																								
B02.02	SX_OB_20220413_16_24_SS_Pri	5.0		<100		<5	<0.50	<0.50	<0.50			<0.50								<0.5		<0.5			
B02.02	SX_OB_20220413_16_24_SS_Pri																								
B02.02	SX_OB_20220413_20_16_SS_Pri	5.0		100		<5	<0.50	<0.50	<0.50			<0.50								<0.5		<0.5			
B02.02	SX_OB_20220413_20_16_SS_Pri																								
B02.02	SX_OB_20220413_20_17_SS_Pri		8.1	<100	28	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220413_20_17_SS_Pri	5.0																							
B02.02	SX_OB_20220413_20_17_SS_Pri	6.4																							
B02.02	SX_OB_20220414_00_02_SS_Pri	5.0		<100		<5	<0.50	<0.50	<0.50			<0.50								<0.5		<0.5			
B02.02	SX_OB_20220414_00_02_SS_Pri																								
B02.02	SX_OB_20220414_00_06_SS_Pri		8.6	<100	29	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220414_00_06_SS_Pri	5.0																							
B02.02	SX_OB_20220414_00_06_SS_Pri	6.4																							
B02.02	SX_OB_20220414_03_53_SS_Pri	2.9		<100		<5	<0.50	<0.50	<0.50			<0.50								<0.5		<0.5			
B02.02	SX_OB_20220414_03_53_SS_Pri																								
B02.02	SX_OB_20220414_04_02_SS_Pri		8.6	<100	36	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220414_04_02_SS_Pri	5.0																							
B02.02	SX_OB_20220414_04_02_SS_Pri	6.4																							



	Solvents					SPOCAS
	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl ketone	pH (CaCl2)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
EQL	0.5	0.5	0.5	0.5	0.5	0.1
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 90						
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 90						
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 90						
EPA PFAS Classification - Tunnel Zone - No option for dis						
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						

Location Code	Field ID						
B02.02	SX_OB_20220412_17_17_SS_Pri	<0.5	<0.5	<0.5	<0.5	<0.5	
B02.02	SX_OB_20220412_17_17_SS_Pri						
B02.02	SX_OB_20220412_17_17_SS_Pri						
B02.02	SX_OB_20220412_17_18_SS_Du	<0.5	<0.5	<0.5	<0.5	<0.5	
B02.02	SX_OB_20220412_17_18_SS_Du						
B02.02	SX_OB_20220412_17_18_SS_Du						
B02.02	SX_OB_20220412_17_19_SS_Tri						7.8
B02.02	SX_OB_20220412_17_19_SS_Tri						
B02.02	SX_OB_20220412_17_22_SS_Pri						7.9
B02.02	SX_OB_20220412_17_22_SS_Pri						
B02.02	SX_OB_20220412_17_27_SS_Pri						7.7
B02.02	SX_OB_20220412_17_27_SS_Pri						
B02.02	SX_OB_20220412_19_56_SS_Pri	<0.5	<0.5	<0.5	<0.5	<0.5	
B02.02	SX_OB_20220412_19_56_SS_Pri						
B02.02	SX_OB_20220412_19_56_SS_Pri						
B02.02	SX_OB_20220412_20_04_SS_Pri						7.7
B02.02	SX_OB_20220412_20_04_SS_Pri						
B02.02	SX_OB_20220412_20_04_SS_Pri						
B02.02	SX_OB_20220412_23_59_SS_Pri						7.7
B02.02	SX_OB_20220412_23_59_SS_Pri						
B02.02	SX_OB_20220413_00_04_SS_Pri	<0.5	<0.5	<0.5	<0.5	<0.5	
B02.02	SX_OB_20220413_00_04_SS_Pri						
B02.02	SX_OB_20220413_00_04_SS_Pri						
B02.02	SX_OB_20220413_03_56_SS_Pri	<0.5	<0.5	<0.5	<0.5	<0.5	
B02.02	SX_OB_20220413_03_56_SS_Pri						
B02.02	SX_OB_20220413_03_56_SS_Pri						
B02.02	SX_OB_20220413_04_01_SS_Pri						7.8
B02.02	SX_OB_20220413_08_15_SS_Pri						7.7
B02.02	SX_OB_20220413_08_15_SS_Pri						
B02.02	SX_OB_20220413_08_17_SS_Du						7.7
B02.02	SX_OB_20220413_08_17_SS_Du						
B02.02	SX_OB_20220413_08_18_SS_Tri	<0.5	<0.5	<0.5	<0.5	<0.5	
B02.02	SX_OB_20220413_08_18_SS_Tri						
B02.02	SX_OB_20220413_08_18_SS_Tri						
B02.02	SX_OB_20220413_08_25_SS_Pri	<0.5	<0.5	<0.5	<0.5	<0.5	
B02.02	SX_OB_20220413_08_25_SS_Pri						
B02.02	SX_OB_20220413_08_25_SS_Pri						
B02.02	SX_OB_20220413_08_29_SS_Pri						7.7
B02.02	SX_OB_20220413_08_29_SS_Pri						
B02.02	SX_OB_20220413_12_43_SS_Pri	<0.5	<0.5	<0.5	<0.5	<0.5	
B02.02	SX_OB_20220413_12_43_SS_Pri						
B02.02	SX_OB_20220413_12_43_SS_Pri						
B02.02	SX_OB_20220413_12_52_SS_Pri						7.8
B02.02	SX_OB_20220413_12_52_SS_Pri						
B02.02	SX_OB_20220413_12_56_SS_Pri	<0.5	<0.5	<0.5	<0.5	<0.5	
B02.02	SX_OB_20220413_12_56_SS_Pri						
B02.02	SX_OB_20220413_12_56_SS_Pri						
B02.02	SX_OB_20220413_16_10_SS_Pri						7.8
B02.02	SX_OB_20220413_16_10_SS_Pri						
B02.02	SX_OB_20220413_16_18_SS_Pri	<0.5	<0.5	<0.5	<0.5	<0.5	
B02.02	SX_OB_20220413_16_18_SS_Pri						
B02.02	SX_OB_20220413_16_18_SS_Pri						
B02.02	SX_OB_20220413_16_20_SS_Du	<0.5	<0.5	<0.5	<0.5	<0.5	

		Solvents					SPOCAS
		4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl ketone	pH (CaCl2)
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
B02.02	SX_OB_20220413_16_20_SS_Du						
B02.02	SX_OB_20220413_16_20_SS_Du						
B02.02	SX_OB_20220413_16_22_SS_Tri						7.8
B02.02	SX_OB_20220413_16_22_SS_Tri						
B02.02	SX_OB_20220413_16_24_SS_Pri						7.7
B02.02	SX_OB_20220413_16_24_SS_Pri						
B02.02	SX_OB_20220413_20_16_SS_Pri						7.9
B02.02	SX_OB_20220413_20_16_SS_Pri						
B02.02	SX_OB_20220413_20_17_SS_Pri	<0.5	<0.5	<0.5	<0.5	<0.5	
B02.02	SX_OB_20220413_20_17_SS_Pri						
B02.02	SX_OB_20220413_20_17_SS_Pri						
B02.02	SX_OB_20220414_00_02_SS_Pri						7.8
B02.02	SX_OB_20220414_00_02_SS_Pri						
B02.02	SX_OB_20220414_00_06_SS_Pri	<0.5	<0.5	<0.5	<0.5	<0.5	
B02.02	SX_OB_20220414_00_06_SS_Pri						
B02.02	SX_OB_20220414_00_06_SS_Pri						
B02.02	SX_OB_20220414_03_53_SS_Pri						7.8
B02.02	SX_OB_20220414_03_53_SS_Pri						
B02.02	SX_OB_20220414_04_02_SS_Pri	<0.5	<0.5	<0.5	<0.5	<0.5	
B02.02	SX_OB_20220414_04_02_SS_Pri						
B02.02	SX_OB_20220414_04_02_SS_Pri						

							Metals											
							Arsenic	Cadmium	Copper	Chromium (III+VI)	Chromium (hexavalent)	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Zinc
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							2	0.4	5	5	1	5	0.1	5	5	2	2	10
Location Code	Field ID	Date	Lab Report Number	Lab Name	Sample Type	Parent Sample												
B02.02	SX_OB_20220412_17_17_SS_Pri	12/04/2022	879810	MGT	Normal		46	<0.4	63	130	<1	5.2	<0.1	<5	190	<2	<2	<10
B02.02	SX_OB_20220412_17_18_SS_Du	12/04/2022	879810	MGT	Field_D	M22-Ap0027889	51	<0.4	66	140	1.4	5.0	<0.1	<5	210	<2	<2	<10
RPD							10	0	5	7	33	4	0	0	10	0	0	0
B02.02	SX_OB_20220412_17_17_SS_Pri	12/04/2022	879810	MGT	Normal		46	<0.4	63	130	<1	5.2	<0.1	<5	190	<2	<2	<10
B02.02	SX_OB_20220412_17_19_SS_Tri	12/04/2022	EM2206764	ALSE-Melbourne	Interlab_D	M22-Ap0027889	29	<1	47	97	<1.0	<5	<0.1	<5	179	<5	<2	<10
RPD							45	0	29	29	0	4	0	0	6	0	0	0

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

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

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier 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																				
Zinc	PAHs (Vic EPA List)	Benzo(b+j)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c-d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Accr

\*\*\*Interlab Duplicates are matched on a per compound basis as m



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	C29-C36	+C10-C36 (Sum of total)	Aldrin	Dieldrin	Aldrin + Dieldrin	DDD	DDT	
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Accr

\*\*\*Interlab Duplicates are matched on a per compound basis as m



		Organochlorine Pesticides																						
		4,4-DDE	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endrin	Endrin ketone	Endrin aldehyde	Endosulfan sulphate	chlordane	Chlordane (cis)	Chlordane (trans)	Hexachlorobenzene	Heptachlor	Heptachlor epoxide	γ-BHC	β-BHC	δ-BHC	ε-BHC (Lindane)	Methoxychlor	Toxaphene	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	p-Chlorophenol
EQL		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.03	0.03	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5	0.1	0.03	0.5
<b>Location Code</b>	<b>Field ID</b>																							
B02.02	SX_OB_20220412_17_17_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5
B02.02	SX_OB_20220412_17_18_SS_Du	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5
RPD		0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0
B02.02	SX_OB_20220412_17_17_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5
B02.02	SX_OB_20220412_17_19_SS_Tri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.10	<0.03	<0.50
RPD		0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	SX_OB_20220412_17_18_SS_Du																							
RPD																								
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	SX_OB_20220412_17_18_SS_Du																							
RPD																								
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	SX_OB_20220412_17_19_SS_Tri																							
RPD																								
E02.01	SX_OB_20220412_07_43_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.10	<0.03	<0.50
E02.01	SX_OB_20220412_07_44_SS_Du	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.10	<0.03	<0.50
RPD		0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E02.01	SX_OB_20220412_07_43_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.10	<0.03	<0.50
E02.01	SX_OB_20220412_07_45_SS_Tri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5
RPD		0	0	0	0	0		0	0	0			0	0	0	0	0	0	0	0	0	0	0	0
E02.01	SX_OB_20220412_07_43_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.10	<0.03	<0.50
E02.01	SX_OB_20220412_07_45_SS_Tri																							
RPD																								
E02.01	SX_OB_20220412_07_43_SS_Pri																							
E02.01	SX_OB_20220412_07_45_SS_Tri																							
RPD																								
E02.01	SX_OB_20220412_07_43_SS_Pri																							
E02.01	SX_OB_20220412_07_45_SS_Tri																							
RPD																								
B02.02	SX_OB_20220413_16_18_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5
B02.02	SX_OB_20220413_16_20_SS_Du	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5
RPD		0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0
B02.02	SX_OB_20220413_16_18_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5
B02.02	SX_OB_20220413_16_22_SS_Tri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.10	<0.03	<0.50
RPD		0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0
B02.02	SX_OB_20220413_16_18_SS_Pri																							
B02.02	SX_OB_20220413_16_20_SS_Du																							
RPD																								
B02.02	SX_OB_20220413_16_18_SS_Pri																							
B02.02	SX_OB_20220413_16_22_SS_Tri																							
RPD																								
B02.02	SX_OB_20220413_08_15_SS_Pri																							
B02.02	SX_OB_20220413_08_17_SS_Du																							
RPD																								
B02.02	SX_OB_20220413_08_15_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.10	<0.03	<0.50
B02.02	SX_OB_20220413_08_17_SS_Du	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.10	<0.03	<0.50
RPD		0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B02.02	SX_OB_20220413_08_15_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.10	<0.03	<0.50
B02.02	SX_OB_20220413_08_18_SS_Tri	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5
RPD		0	0	0	0	0		0	0	0			0	0	0	0	0	0	0	0	0	0	0	0
B02.02	SX_OB_20220413_08_15_SS_Pri	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.10	<0.03	<0.50
B02.02	SX_OB_20220413_08_18_SS_Tri																							
RPD																								

\*RPDs have only been considered where a concentration is greater

Organochlorine Pesticides																						
4,4-DDE	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endrin	Endrin ketone	Endrin aldehyde	Endosulfan sulphate	Chlordane	Chlordane (cis)	Chlordane (trans)	Hexachlorobenzene	Heptachlor	Heptachlor epoxide	$\alpha$ -BHC	$\beta$ -BHC	$\delta$ -BHC	$\gamma$ -BHC (Lindane)	Methoxychlor	Toxaphene	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	2-Chlorophenol
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Accr

\*\*\*Interlab Duplicates are matched on a per compound basis as m

		Phenols																						
Location Code	Field ID	2,4-Dichlorophenol mg/kg	2,4,5-Trichlorophenol mg/kg	2,4,6-Trichlorophenol mg/kg	2,6-Dichlorophenol mg/kg	4-chloro-3-methylphenol mg/kg	Pentachlorophenol mg/kg	2,3,4,5 & 2,3,4,6- Tetrachlorophenol mg/kg	4,6-Dinitro-2-methylphenol mg/kg	Tetrachlorophenols mg/kg	2,3,5,6-Tetrachlorophenol mg/kg	Cresol Total mg/kg	4,6-Dinitro-o-cyclohexyl- phenol mg/kg	Phenols (halogenated) EPA Vic mg/kg	Phenols (non-halogenated) EPA Vic mg/kg	2,4-Dimethylphenol mg/kg	2-Methylphenol mg/kg	2-Nitrophenol mg/kg	2,4-Dinitrophenol mg/kg	3&4-Methylphenol (m&p- kreso) mg/kg	4-Nitrophenol mg/kg	Di-noseb mg/kg	Phenol mg/kg	Phenols (Total Halogenated) mg/kg
EQL		0.5	1	1	0.5	1	1	0.05	5	10	0.03	0.5	20	1	20	0.5	0.2	1	5	0.4	5	20	0.5	1
B02.02	SX_OB_20220412_17_17_SS_Pri	<0.5	<1	<1	<0.5	<1	<1		<5	<10		<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1
B02.02	SX_OB_20220412_17_18_SS_Du	<0.5	<1	<1	<0.5	<1	<1		<5	<10		<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1
RPD		0	0	0	0	0	0		0	0		0	0			0	0	0	0	0	0	0	0	0
B02.02	SX_OB_20220412_17_17_SS_Pri	<0.5	<1	<1	<0.5	<1	<1		<5	<10		<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1
B02.02	SX_OB_20220412_17_19_SS_Tri	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1	<1
RPD		0	0	0	0	0	0		0			0				0	0	0	0	0	0	0	0	0
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	SX_OB_20220412_17_18_SS_Du																							
RPD																								
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	SX_OB_20220412_17_18_SS_Du																							
RPD																								
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	SX_OB_20220412_17_19_SS_Tri																							
RPD																								
E02.01	SX_OB_20220412_07_43_SS_Pri	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1	<1
E02.01	SX_OB_20220412_07_44_SS_Du	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1	<1
RPD		0	0	0	0	0	0		0		0		0	0	0	0	0	0	0	0	0	0	0	0
E02.01	SX_OB_20220412_07_43_SS_Pri	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1	<1
E02.01	SX_OB_20220412_07_45_SS_Tri	<0.5	<1	<1	<0.5	<1	<1		<5	<10		<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1
RPD		0	0	0	0	0	0		0			0				0	0	0	0	0	0	0	0	0
E02.01	SX_OB_20220412_07_43_SS_Pri	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1	<1
E02.01	SX_OB_20220412_07_45_SS_Tri																							
RPD																								
E02.01	SX_OB_20220412_07_43_SS_Pri																							
E02.01	SX_OB_20220412_07_45_SS_Tri																							
RPD																								
B02.02	SX_OB_20220413_16_18_SS_Pri	<0.5	<1	<1	<0.5	<1	<1		<5	<10		<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1
B02.02	SX_OB_20220413_16_20_SS_Du	<0.5	<1	<1	<0.5	<1	<1		<5	<10		<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1
RPD		0	0	0	0	0	0		0	0		0	0			0	0	0	0	0	0	0	0	0
B02.02	SX_OB_20220413_16_18_SS_Pri	<0.5	<1	<1	<0.5	<1	<1		<5	<10		<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1
B02.02	SX_OB_20220413_16_22_SS_Tri	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1	<1
RPD		0	0	0	0	0	0		0			0				0	0	0	0	0	0	0	0	0
B02.02	SX_OB_20220413_16_18_SS_Pri																							
B02.02	SX_OB_20220413_16_20_SS_Du																							
RPD																								
B02.02	SX_OB_20220413_16_18_SS_Pri																							
B02.02	SX_OB_20220413_16_22_SS_Tri																							
RPD																								
B02.02	SX_OB_20220413_08_15_SS_Pri																							
B02.02	SX_OB_20220413_08_17_SS_Du																							
RPD																								
B02.02	SX_OB_20220413_08_15_SS_Pri	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1	<1
B02.02	SX_OB_20220413_08_17_SS_Du	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1	<1
RPD		0	0	0	0	0	0		0		0		0	0	0	0	0	0	0	0	0	0	0	0
B02.02	SX_OB_20220413_08_15_SS_Pri	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1	<1
B02.02	SX_OB_20220413_08_18_SS_Tri	<0.5	<1	<1	<0.5	<1	<1		<5	<10		<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1
RPD		0	0	0	0	0	0		0			0				0	0	0	0	0	0	0	0	0
B02.02	SX_OB_20220413_08_15_SS_Pri	<0.50	<1.00	<1.00	<0.50	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1	<1
B02.02	SX_OB_20220413_08_18_SS_Tri																							
RPD																								

\*RPDs have only been considered where a concentration is greater than the RPD value

Phenols																						
2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol	4-chloro-3-methylphenol	Pentachlorophenol	2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4,6-Dinitro-2-methylphenol	Tetrachlorophenols	2,3,5,6-Tetrachlorophenol	Cresol Total	4,6-Dinitro-o-cyclohexyl phenol	Phenols (halogenated) EPAVic	Phenols (non-halogenated) EPAVic	2,4-Dimethylphenol	2-Methylphenol	2-Nitrophenol	2,4-Dinitrophenol	3&4-Methylphenol (m&p-cresol)	4-Nitrophenol	Dinoseb	Phenol	Phenols (Total Halogenated)
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Accr

\*\*\*Interlab Duplicates are matched on a per compound basis as m



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)		N-Methyl perfluorooctane sulfonamide (NMeFOSA)		N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)		N-Methylperfluorooctanesulf onamidoethanol (N-MeFOSE)		Perfluorobutanoic acid (PFBA)		
	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Accr

\*\*\*Interlab Duplicates are matched on a per compound basis as m



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

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Accr

\*\*\*Interlab Duplicates are matched on a per compound basis as m





(PFPeA)	Perfluoropentane sulfonic acid (PFPeS)		Perfluoropropanesulfonic acid (PFPrS)		Perfluorotetradecanoic acid (PFTeDA)		Perfluorotridecanoic acid (PFTrDA)		Perfluoro undecanoic 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 (PFHxS + PFOS + PFOA)*		Sum of PFAS	Sum of 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	mg/kg	mg/L	mg/kg	mg/L	mg/kg	

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Accr

\*\*\*Interlab Duplicates are matched on a per compound basis as m



Chlorinated Hydrocarbons																						
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	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
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Acc

\*\*\*Interlab Duplicates are matched on a per compound basis as m

	Location Code	Field ID	NA							PCBs									Inorganics				
			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	Arochlor 1254	Arochlor 1221	Arochlor 1260	Arochlor 1016	PCBs (Sum of total)	pH (after HCL)	pH (Final)	pH (Initial)	pH of Leaching Fluid
EQL			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	UG/KG	µg/L	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
			0.5	0.5	0.5	0.5	0.5	0.5	0.05		1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
B02.02	SX_OB_20220412_17_17_SS_Pri		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				8.4
B02.02	SX_OB_20220412_17_18_SS_Du		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				8.7
RPD			0	0	0	0	0	0	0			0	0	0	0	0	0	0	0				4
B02.02	SX_OB_20220412_17_17_SS_Pri		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				8.4
B02.02	SX_OB_20220412_17_19_SS_Tri		<0.50		<0.50		<0.50	<0.50	<10.0	<0.05	24.6								<0.1	1.2	4.9	9.5	5.0
RPD			0		0		0	0	0									0					
B02.02	SX_OB_20220412_17_17_SS_Pri							<0.05														5.1	5.1
B02.02	SX_OB_20220412_17_18_SS_Du							<0.05														5.1	5.1
RPD								0														0	0
B02.02	SX_OB_20220412_17_17_SS_Pri							<0.05														8.7	6.4
B02.02	SX_OB_20220412_17_18_SS_Du							<0.05														8.8	6.4
RPD								0														1	0
B02.02	SX_OB_20220412_17_17_SS_Pri							<0.05														8.7	6.4
B02.02	SX_OB_20220412_17_19_SS_Tri								<0.05													9.3	
RPD																						7	
E02.01	SX_OB_20220412_07_43_SS_Pri		<0.50		<0.50		<0.50	<0.50	<10.0	<0.05	32.4								<0.1	1.3	4.9	8.8	5.0
E02.01	SX_OB_20220412_07_44_SS_Du		<0.50		<0.50		<0.50	<0.50	<10.0	<0.05	29.9								<0.1	1.2	5.0	8.9	5.0
RPD			0		0		0	0	0		8							0	8	2	1	0	0
E02.01	SX_OB_20220412_07_43_SS_Pri		<0.50		<0.50		<0.50	<0.50	<10.0	<0.05	32.4								<0.1	1.3	4.9	8.8	5.0
E02.01	SX_OB_20220412_07_45_SS_Tri		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				7.7
RPD			0		0		0	0	0									0					
E02.01	SX_OB_20220412_07_43_SS_Pri		<0.50		<0.50		<0.50	<0.50	<10.0	<0.05	32.4								<0.1	1.3	4.9	8.8	5.0
E02.01	SX_OB_20220412_07_45_SS_Tri							<0.05														5.1	5.1
RPD								0														4	2
E02.01	SX_OB_20220412_07_43_SS_Pri							<0.05														9.3	
E02.01	SX_OB_20220412_07_44_SS_Du							<0.05														9.3	
RPD								0														0	
E02.01	SX_OB_20220412_07_43_SS_Pri							<0.05														9.3	
E02.01	SX_OB_20220412_07_45_SS_Tri							<0.05														8.7	6.4
RPD																						7	
B02.02	SX_OB_20220413_16_18_SS_Pri		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				8.5
B02.02	SX_OB_20220413_16_20_SS_Du		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				8.3
RPD			0	0	0	0	0	0	0			0	0	0	0	0	0	0	0				2
B02.02	SX_OB_20220413_16_18_SS_Pri		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				8.5
B02.02	SX_OB_20220413_16_22_SS_Tri		<0.50		<0.50		<0.50	<0.50	<10.0	<0.05	29.2								<0.1	1.0	5.0	9.2	5.0
RPD			0		0		0	0	0									0					
B02.02	SX_OB_20220413_16_18_SS_Pri							<0.05														5.3	5.0
B02.02	SX_OB_20220413_16_20_SS_Du							<0.05														5.3	5.0
RPD								0														0	0
B02.02	SX_OB_20220413_16_18_SS_Pri							<0.05														8.7	6.4
B02.02	SX_OB_20220413_16_20_SS_Du							<0.05														8.7	6.4
RPD								0														0	0
B02.02	SX_OB_20220413_16_18_SS_Pri							<0.05														8.7	6.4
B02.02	SX_OB_20220413_16_22_SS_Tri								<0.01													9.7	
RPD																						11	
B02.02	SX_OB_20220413_08_15_SS_Pri							<0.01														9.4	
B02.02	SX_OB_20220413_08_17_SS_Du							<0.01														9.5	
RPD								0														1	0
B02.02	SX_OB_20220413_08_15_SS_Pri							<0.01														9.4	
B02.02	SX_OB_20220413_08_18_SS_Tri							<0.05														8.6	6.4
RPD																						9	
B02.02	SX_OB_20220413_08_15_SS_Pri		<0.50		<0.50		<0.50	<0.50	<10.0	<0.05	30.1								<0.1	1.0	5.0	9.4	5.0
B02.02	SX_OB_20220413_08_17_SS_Du		<0.50		<0.50		<0.50	<0.50	<10.0	<0.05	30.1								<0.1	1.0	5.0	8.9	5.0
RPD			0		0		0	0	0		0							0	0	0	5	0	0
B02.02	SX_OB_20220413_08_15_SS_Pri		<0.50		<0.50		<0.50	<0.50	<10.0	<0.05	30.1								<0.1	1.0	5.0	9.4	5.0
B02.02	SX_OB_20220413_08_18_SS_Tri		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				7.5
RPD			0		0		0	0	0									0					
B02.02	SX_OB_20220413_08_15_SS_Pri		<0.50		<0.50		<0.50	<0.50	<10.0	<0.05	30.1								<0.1	1.0	5.0	9.4	5.0
B02.02	SX_OB_20220413_08_18_SS_Tri							<0.05														5.3	5.0
RPD								0														6	0

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

							NA			PCBs							Inorganics				
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	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)
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	UG/KG	µg/L	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	-	-

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Accr

\*\*\*Interlab Duplicates are matched on a per compound basis as m

EQL					Halogenated Benzenes							Halogenated Hydrocarbons					MAH							
	Fluoride	Moisture Content (dried @ 103°C)	Cyanide Total	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Bromobenzene	4-chlorotoluene	Chlorobenzene	Iodomethane	Bromomethane	1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Total MAH	Monocyclic aromatic hydrocarbons EPA/VIC	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone	
	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	100	1	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Location Code	Field ID																							
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	450	25	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD	127	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	170	26	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD	52		0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	SX_OB_20220412_17_18_SS_Du																							
RPD																								
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	SX_OB_20220412_17_18_SS_Du																							
RPD																								
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	SX_OB_20220412_17_19_SS_Tri																							
RPD																								
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	SX_OB_20220412_17_18_SS_Du																							
RPD																								
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	SX_OB_20220412_17_19_SS_Tri																							
RPD																								
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	SX_OB_20220412_17_18_SS_Du																							
RPD																								
B02.02	SX_OB_20220412_17_17_SS_Pri																							
B02.02	SX_OB_20220412_17_19_SS_Tri																							
RPD																								
E02.01	SX_OB_20220412_07_43_SS_Pri																							
E02.01	140		<5	<0.50	<0.50		<0.50			<0.50							<0.5		<0.5					
E02.01	SX_OB_20220412_07_44_SS_Du																							
E02.01	120		<5	<0.50	<0.50		<0.50			<0.50							<0.5		<0.5					
RPD	15		0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
E02.01	SX_OB_20220412_07_43_SS_Pri																							
E02.01	140		<5	<0.50	<0.50		<0.50			<0.50							<0.5		<0.5					
E02.01	SX_OB_20220412_07_45_SS_Tri																							
E02.01	440	29	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD	103		0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
E02.01	SX_OB_20220412_07_43_SS_Pri																							
E02.01	140		<5	<0.50	<0.50		<0.50			<0.50							<0.5		<0.5					
E02.01	SX_OB_20220412_07_45_SS_Tri																							
RPD																								
E02.01	SX_OB_20220412_07_43_SS_Pri																							
E02.01	SX_OB_20220412_07_45_SS_Tri																							
RPD																								
E02.01	SX_OB_20220412_07_43_SS_Pri																							
E02.01	SX_OB_20220412_07_45_SS_Tri																							
RPD																								
B02.02	SX_OB_20220413_16_18_SS_Pri																							
B02.02	290	29	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220413_16_20_SS_Du																							
B02.02	290	29	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
B02.02	SX_OB_20220413_16_18_SS_Pri																							
B02.02	290	29	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B02.02	SX_OB_20220413_16_22_SS_Tri																							
B02.02	<100		<5	<0.50	<0.50		<0.50			<0.50							<0.5		<0.5					
RPD	97		0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
B02.02	SX_OB_20220413_16_18_SS_Pri																							
B02.02	SX_OB_20220413_16_20_SS_Du																							
RPD																								
B02.02	SX_OB_20220413_16_18_SS_Pri																							
B02.02	SX_OB_20220413_16_20_SS_Du																							
RPD																								
B02.02	SX_OB_20220413_16_18_SS_Pri																							
B02.02	SX_OB_20220413_16_22_SS_Tri																							
RPD																								
B02.02	SX_OB_20220413_08_15_SS_Pri																							
B02.02	SX_OB_20220413_08_17_SS_Du																							
RPD																								
B02.02	SX_OB_20220413_08_15_SS_Pri																							
B02.02	SX_OB_20220413_08_18_SS_Tri																							
RPD																								
B02.02	SX_OB_20220413_08_15_SS_Pri																							
B02.02	<100		<5	<0.50	<0.50		<0.50			<0.50							<0.5		<0.5					
B02.02	SX_OB_20220413_08_17_SS_Du																							
B02.02	<100		<5	<0.50	<0.50		<0.50			<0.50							<0.5		<0.5					
RPD	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
B02.02	SX_OB_20220413_08_15_SS_Pri																							
B02.02	<100	31	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
B02.02	SX_OB_20220413_08_15_SS_Pri																							
B02.02	<100		<5	<0.50	<0.50		<0.50			<0.50							<0.5		<0.5					
B02.02	SX_OB_20220413_08_18_SS_Tri																							
B02.02	<100		<5	<0.50	<0.50		<0.50			<0.50							<0.5		<0.5					
RPD																								

\*RPDs have only been considered where a concentration is greater

Fluoride	Moisture Content (dried @ 103°C)	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	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone
mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Accr

\*\*\*Interlab Duplicates are matched on a per compound basis as m



Solvents			SPOCAS
Allyl chloride	Carbon disulfide	Methyl Ethyl Ketone	pH (CaCl2)
mg/kg	mg/kg	mg/kg	-

\*\*Elevated RPDs are highlighted as per QAQC Profile settings (Accr

\*\*\*Interlab Duplicates are matched on a per compound basis as m

# TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	B02.0220220426123246_02	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001_01</u>
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ATTACHMENT B: 95% UCL AVE CALCULATIONS

	A	B	C	D	E	F	G	H	I	J	K	L	
1	<b>UCL Statistics for Data Sets with Non-Detects</b>												
2													
3	User Selected Options												
4	Date/Time of Computation			ProUCL 5.129/04/2022 2:36:33 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				30		Number of Distinct Observations				23		
15									Number of Missing Observations				0
16	Minimum				25		Mean				40.57		
17	Maximum				69		Median				36.5		
18	SD				12.87		Std. Error of Mean				2.35		
19	Coefficient of Variation				0.317		Skewness				0.735		
20													
21	<b>Normal GOF Test</b>												
22	Shapiro Wilk Test Statistic				0.907		<b>Shapiro Wilk GOF Test</b>						
23	5% Shapiro Wilk Critical Value				0.927		Data Not Normal at 5% Significance Level						
24	Lilliefors Test Statistic				0.142		<b>Lilliefors GOF Test</b>						
25	5% Lilliefors Critical Value				0.159		Data appear Normal at 5% Significance Level						
26	<b>Data appear Approximate 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				44.56		95% Adjusted-CLT UCL (Chen-1995)				44.77		
31							95% Modified-t UCL (Johnson-1978)				44.61		
32													
33	<b>Gamma GOF Test</b>												
34	A-D Test Statistic				0.65		<b>Anderson-Darling Gamma GOF Test</b>						
35	5% A-D Critical Value				0.745		Detected data appear Gamma Distributed at 5% Significance Level						
36	K-S Test Statistic				0.136		<b>Kolmogorov-Smirnov Gamma GOF Test</b>						
37	5% K-S Critical Value				0.16		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)				11.04		k star (bias corrected MLE)				9.958		
42	Theta hat (MLE)				3.675		Theta star (bias corrected MLE)				4.074		
43	nu hat (MLE)				662.4		nu star (bias corrected)				597.5		
44	MLE Mean (bias corrected)				40.57		MLE Sd (bias corrected)				12.86		
45									Approximate Chi Square Value (0.05)				541.8
46	Adjusted Level of Significance				0.041						Adjusted Chi Square Value		538.7
47													
48	<b>Assuming Gamma Distribution</b>												
49	95% Approximate Gamma UCL (use when n>=50))				44.74		95% Adjusted Gamma UCL (use when n<50)				44.99		
50													
51	<b>Lognormal GOF Test</b>												
52	Shapiro Wilk Test Statistic				0.939		<b>Shapiro Wilk Lognormal GOF Test</b>						
53	5% Shapiro Wilk Critical Value				0.927		Data appear Lognormal at 5% Significance Level						
54	Lilliefors Test Statistic				0.133		<b>Lilliefors Lognormal GOF Test</b>						

	A	B	C	D	E	F	G	H	I	J	K	L
55	5% Lilliefors Critical Value					0.159	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					3.219	Mean of logged Data					3.657
60	Maximum of Logged Data					4.234	SD of logged Data					0.305
61												
62	<b>Assuming Lognormal Distribution</b>											
63	95% H-UCL					44.96	90% Chebyshev (MVUE) UCL					47.4
64	95% Chebyshev (MVUE) UCL					50.51	97.5% Chebyshev (MVUE) UCL					54.84
65	99% Chebyshev (MVUE) UCL					63.33						
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					44.43	95% Jackknife UCL					44.56
72	95% Standard Bootstrap UCL					44.38	95% Bootstrap-t UCL					44.77
73	95% Hall's Bootstrap UCL					44.68	95% Percentile Bootstrap UCL					44.43
74	95% BCA Bootstrap UCL					44.67						
75	90% Chebyshev(Mean, Sd) UCL					47.62	95% Chebyshev(Mean, Sd) UCL					50.81
76	97.5% Chebyshev(Mean, Sd) UCL					55.24	99% Chebyshev(Mean, Sd) UCL					63.95
77												
78	<b>Suggested UCL to Use</b>											
79	95% Student's-t UCL					44.56						
80												
81	When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test											
82	When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL											
83												
84	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
85	Recommendations are based upon data size, data distribution, and skewness.											
86	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
87	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
88												
89												
90	<b>Nickel</b>											
91												
92	<b>General Statistics</b>											
93	Total Number of Observations					30	Number of Distinct Observations					23
94							Number of Missing Observations					0
95	Minimum					117	Mean					188.5
96	Maximum					330	Median					183.5
97	SD					49.53	Std. Error of Mean					9.044
98	Coefficient of Variation					0.263	Skewness					1.392
99												
100	<b>Normal GOF Test</b>											
101	Shapiro Wilk Test Statistic					0.883	<b>Shapiro Wilk GOF Test</b>					
102	5% Shapiro Wilk Critical Value					0.927	Data Not Normal at 5% Significance Level					
103	Lilliefors Test Statistic					0.172	<b>Lilliefors GOF Test</b>					
104	5% Lilliefors Critical Value					0.159	Data Not Normal at 5% Significance Level					
105	<b>Data Not Normal at 5% Significance Level</b>											
106												
107	<b>Assuming Normal Distribution</b>											
108	<b>95% Normal UCL</b>					<b>95% UCLs (Adjusted for Skewness)</b>						

	A	B	C	D	E	F	G	H	I	J	K	L
109	95% Student's-t UCL					203.9	95% Adjusted-CLT UCL (Chen-1995)					205.8
110							95% Modified-t UCL (Johnson-1978)					204.2
111												
112	<b>Gamma GOF Test</b>											
113	A-D Test Statistic					0.551	<b>Anderson-Darling Gamma GOF Test</b>					
114	5% A-D Critical Value					0.745	Detected data appear Gamma Distributed at 5% Significance Level					
115	K-S Test Statistic					0.138	<b>Kolmogorov-Smirnov Gamma GOF Test</b>					
116	5% K-S Critical Value					0.16	Detected data appear Gamma Distributed at 5% Significance Level					
117	<b>Detected data appear Gamma Distributed at 5% Significance Level</b>											
118												
119	<b>Gamma Statistics</b>											
120	k hat (MLE)					17.15	k star (bias corrected MLE)					15.46
121	Theta hat (MLE)					10.99	Theta star (bias corrected MLE)					12.2
122	nu hat (MLE)					1029	nu star (bias corrected)					927.4
123	MLE Mean (bias corrected)					188.5	MLE Sd (bias corrected)					47.95
124							Approximate Chi Square Value (0.05)					857.7
125	Adjusted Level of Significance					0.041	Adjusted Chi Square Value					853.9
126												
127	<b>Assuming Gamma Distribution</b>											
128	95% Approximate Gamma UCL (use when n>=50)					203.8	95% Adjusted Gamma UCL (use when n<50)					204.7
129												
130	<b>Lognormal GOF Test</b>											
131	Shapiro Wilk Test Statistic					0.959	<b>Shapiro Wilk Lognormal GOF Test</b>					
132	5% Shapiro Wilk Critical Value					0.927	Data appear Lognormal at 5% Significance Level					
133	Lilliefors Test Statistic					0.121	<b>Lilliefors Lognormal GOF Test</b>					
134	5% Lilliefors Critical Value					0.159	Data appear Lognormal at 5% Significance Level					
135	<b>Data appear Lognormal at 5% Significance Level</b>											
136												
137	<b>Lognormal Statistics</b>											
138	Minimum of Logged Data					4.762	Mean of logged Data					5.21
139	Maximum of Logged Data					5.799	SD of logged Data					0.241
140												
141	<b>Assuming Lognormal Distribution</b>											
142	95% H-UCL					204	90% Chebyshev (MVUE) UCL					213.3
143	95% Chebyshev (MVUE) UCL					224.7	97.5% Chebyshev (MVUE) UCL					240.4
144	99% Chebyshev (MVUE) UCL					271.4						
145												
146	<b>Nonparametric Distribution Free UCL Statistics</b>											
147	<b>Data appear to follow a Discernible Distribution at 5% Significance Level</b>											
148												
149	<b>Nonparametric Distribution Free UCLs</b>											
150	95% CLT UCL					203.4	95% Jackknife UCL					203.9
151	95% Standard Bootstrap UCL					203.1	95% Bootstrap-t UCL					207.8
152	95% Hall's Bootstrap UCL					208.6	95% Percentile Bootstrap UCL					204.3
153	95% BCA Bootstrap UCL					205.1						
154	90% Chebyshev(Mean, Sd) UCL					215.6	95% Chebyshev(Mean, Sd) UCL					227.9
155	97.5% Chebyshev(Mean, Sd) UCL					245	99% Chebyshev(Mean, Sd) UCL					278.5
156												
157	<b>Suggested UCL to Use</b>											
158	95% Adjusted Gamma UCL					204.7						
159												
160	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
161	Recommendations are based upon data size, data distribution, and skewness.											
162	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											



# TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	B02.0220220426123246_02	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001_01</u>
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ATTACHMENT C: LABORATORY CERTIFICATES



# CHAIN OF CUSTODY RECORD

Eurofins | Environment Testing ABN 52 005 080 521

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

Brisbane Laboratory  
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 07 3902 4600 EnviroSampleQLD@eurofins.com

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

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

<b>Company</b>		AGON Environmental - Tunnel Spoil Testing		<b>Project No</b>	JC0927					<b>Project Manager</b>	Craig Trimbur					<b>Sampler(s)</b>	Hannah - EP Risk Louis - EP Risk								
<b>Address</b>		Unit H76, 63-85 Turner St, Port Melbourne VIC 3207		<b>Project Name</b>	WGTP-Tunnel Ref: 20220413043532-Eurofin-21					<b>EDD Format</b>	ESdat, EQUIS etc					<b>ESdat</b>	<b>Handed over by</b>								
<b>Contact Name</b>		Craig Trimbur David Lawson		<b>Analysis\$</b> Where metals are requested, please specify "Total" or "Filtered" SUITE code must be used to attract SUITE pricing.	<b>Spoil Sample Preparation</b>	Suite WGTP-R1-TRH/PAH/Phenols/OCPI/PCB/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				
<b>Phone No</b>		+61 400 826 907 (Craig) +61 490 411 004 (David)				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									
<b>Special Directions</b>		Please provide an interim lab report if finalised report has not been provided by 14 days from sample receipt.  Please provide eSRN along with other sample receipt documentation.				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									
<b>Purchase Order</b>						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									
<b>Quote ID No</b>		Agon WGTP TST				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									
<b>Email for Invoice</b>		finance@agonenviro.com.au LabReports.TST@agonenviro.com.au		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											
<b>Email for Results</b>		LabReports.TST@agonenviro.com.au agonenvironmental@esdat.com.au motherhublabresults1@wgtp.com.au Amrit.Kaur@agile-analytics.com.au		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											
<b>Containers</b>		Change container type & size if necessary		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											
<b>Required Turnaround Time (TAT)</b>		Default will be 5 days if not ticked.		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											
<input type="checkbox"/> Overnight (reporting by 9am) ♦		♦ Surcharge will apply		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											
<input type="checkbox"/> Same day ♦		<input type="checkbox"/> 1 day ♦		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											
<input type="checkbox"/> 2 days ♦		<input type="checkbox"/> 3 days ♦		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											
<input checked="" type="checkbox"/> 5 days (Standard)				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											
<input type="checkbox"/> Other ( )				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											
<b>No</b>	<b>Client Sample ID</b>	<b>Sampled Date/Time</b> dd/mm/yyyy hh:mm	<b>Matrix</b> Solid (S) Water (W)	<b>500mL Plastic</b>	<b>250mL Plastic</b>	<b>125mL Plastic</b>	<b>200mL Amber Glass</b>	<b>40mL VOA vial</b>	<b>500mL PFAS Bottle</b>	<b>Jar (Glass or HDPE)</b>	<b>Other (Asbestos AS6984, WA Guidelines)</b>	<b>Sample Comments / Dangerous Goods Hazard Warning</b>													
1	SX_OB_20220412_07_45_SS_Triplicate_EUF	12.04.22 7:45	S	X	X	X	X	X																	
2	SX_OB_20220412_07_51_SS_Primary_EUF	12.04.22 7:51	S	X	X	X	X	X																	
3																									
4	SX_OB_20220412_16_09_SR_Rinsate_EUF	12.04.22 16:09	W				X																		
5	SX_OB_20220412_16_16_SB_Blank_EUF	12.04.22 16:16	W				X																		
6	SX_OB_20220412_17_17_SS_Primary_EUF	12.04.22 17:17	S	X	X	X	X	X																	
7	SX_OB_20220412_17_18_SS_Duplicate_EUF	12.04.22 17:18	S	X	X	X	X	X																	
8	SX_OB_20220412_19_56_SS_Primary_EUF	12.04.22 19:56	S	X	X	X	X	X																	
9	SX_OB_20220413_00_04_SS_Primary_EUF	13.04.22 00:04	S	X	X	X	X	X																	
10	SX_OB_20220413_03_56_SS_Primary_EUF	13.04.22 03:56	S	X	X	X	X	X																	
<b>Total Counts</b>				7	7	9	7	7																	
<b>Method of Shipment</b>		<input checked="" type="checkbox"/> Courier (#) <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Postal		Name		Signature		Date		Time		Report No													
<b>Laboratory Use Only</b>		Received By: <i>Jake</i>		SYD   BNE   MEL   PER   ADL   NTL   DRW		Signature: <i>[Signature]</i>		Date: 13/4		Time: 11:58		Temperature: 18.1													
		Received By:		SYD   BNE   MEL   PER   ADL   NTL   DRW		Signature:		Date:		Time:		Report No: 879/810													



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43 Detroit Drive  
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:** 20220413043532-Eurofin-21  
**Project ID:** JC0927  
**Turnaround time:** 5 Day  
**Date/Time received:** Apr 13, 2022 11:58 AM  
**Eurofins reference:** 879810

## 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

## 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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Phone : +61 2 9900 8400  
NATA # 1261 Site # 18217

**Brisbane**  
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Murarrie QLD 4172  
Phone : +61 7 3902 4600  
NATA # 1261 Site # 20794

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

## Eurofins ARL Pty Ltd

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Welsphool WA 6106  
Phone : +61 8 6253 4444  
NATA # 2377 Site # 2370

## Eurofins Environment Testing NZ Limited

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

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Fullarton  
SA 5063  
  
**Project Name:** 20220413043532-Eurofin-21  
**Project ID:** JC0927

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**Fax:**

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

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_OB_20220412_07_45_S_S_Triplicate_EUF	Apr 12, 2022	7:45AM	Soil	M22-Ap0027885		X	X	X
2	SX_OB_20220412_07_51_S_S_Primary_EUF	Apr 12, 2022	7:51AM	Soil	M22-Ap0027886		X	X	X
3	SX_OB_20220412_16_09_S_R_Rinsate_EUF	Apr 12, 2022	4:09PM	Water	M22-Ap0027887			X	



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<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
4	SX_OB_20220412_16_16_S B_Blank_EUF	Apr 12, 2022	4:16PM	Water	M22-Ap0027888			X	
5	SX_OB_20220412_17_17_S S_Primary_EUF	Apr 12, 2022	5:17PM	Soil	M22-Ap0027889		X	X	X
6	SX_OB_20220412_17_18_S S_Duplicate_EUF	Apr 12, 2022	5:18PM	Soil	M22-Ap0027890		X	X	X
7	SX_OB_20220412_19_56_S S_Primary_EU	Apr 12, 2022	7:56PM	Soil	M22-Ap0027891		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>									
	F								
8	SX_OB_20220413_00_04_S_S_Primary_EU_F	Apr 13, 2022	12:04AM	Soil	M22-Ap0027892		X	X	X
9	SX_OB_20220413_03_56_S_S_Primary_EU_F	Apr 13, 2022	3:56AM	Soil	M22-Ap0027893		X	X	X
10	SX_OB_20220412_07_45_S_S_Triplicate_EUF	Apr 12, 2022	7:45AM	AUS Leachate - pH 5.0	M22-Ap0027894	X		X	
11	SX_OB_20220	Apr 12, 2022	7:51AM	AUS Leachate	M22-	X		X	

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<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>									
	412_07_51_S S_Primary_EU F			- pH 5.0	Ap0027895				
12	SX_OB_20220 412_17_17_S S_Primary_EU F	Apr 12, 2022	5:17PM	AUS Leachate - pH 5.0	M22- Ap0027896	X		X	
13	SX_OB_20220 412_17_18_S S_Duplicate_E UF	Apr 12, 2022	5:18PM	AUS Leachate - pH 5.0	M22- Ap0027897	X		X	
14	SX_OB_20220 412_19_56_S S_Primary_EU	Apr 12, 2022	7:56PM	AUS Leachate - pH 5.0	M22- Ap0027898	X		X	



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<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_20220413_00_04_S_S_Primary_EU_F	Apr 13, 2022	12:04AM	AUS Leachate - pH 5.0	M22-Ap0027899	X		X	
16	SX_OB_20220413_03_56_S_S_Primary_EU_F	Apr 13, 2022	3:56AM	AUS Leachate - pH 5.0	M22-Ap0027900	X		X	
17	SX_OB_20220412_07_45_S_S_Triplicate_EUF	Apr 12, 2022	7:45AM	AUS Leachate - Reagent Water	M22-Ap0027901	X		X	
18	SX_OB_20220	Apr 12, 2022	7:51AM	AUS Leachate	M22-	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 13, 2022 11:58 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	879810	<b>Due:</b>	Apr 22, 2022
<b>Project Name:</b>	20220413043532-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)

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<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	412_07_51_S S_Primary_EU F			- Reagent Water	Ap0027902				
19	SX_OB_20220 412_17_17_S S_Primary_EU F	Apr 12, 2022	5:17PM	AUS Leachate - Reagent Water	M22- Ap0027903	X		X	
20	SX_OB_20220 412_17_18_S S_Duplicate_E UF	Apr 12, 2022	5:18PM	AUS Leachate - Reagent Water	M22- Ap0027904	X		X	
21	SX_OB_20220 412_19_56_S S_Primary_EU	Apr 12, 2022	7:56PM	AUS Leachate - Reagent Water	M22- Ap0027905	X		X	



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<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
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<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_20220413_00_04_S_S_Primary_EU F	Apr 13, 2022	12:04AM	AUS Leachate - Reagent Water	M22-Ap0027906	X		X	
23	SX_OB_20220413_03_56_S_S_Primary_EU F	Apr 13, 2022	3:56AM	AUS Leachate - Reagent Water	M22-Ap0027907	X		X	
<b>Test Counts</b>						14	7	23	7



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 **879810-L**  
Project name **20220413043532-Eurofin-21**  
Project ID **JC0927**  
Received Date **Apr 13, 2022**

Client Sample ID			SX_OB_20220 412_07_45_SS _TriPLICATE_EU F	SX_OB_20220 412_07_51_SS _Primary_EUF	SX_OB_20220 412_17_17_SS _Primary_EUF	SX_OB_20220 412_17_18_SS _Duplicate_EU F
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- Ap0027894	M22- Ap0027895	M22- Ap0027896	M22- Ap0027897
Date Sampled			Apr 12, 2022	Apr 12, 2022	Apr 12, 2022	Apr 12, 2022
Test/Reference	LOR	Unit				
<b>AUS Leaching Procedure</b>						
Leachate Fluid <sup>C01</sup>		comment	1.0	1.0	1.0	1.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	5.1	5.1	5.1	5.1
pH (off)	0.1	pH Units	5.1	5.1	5.1	5.1
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
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	%	114	89	110	119
13C5-PFPeA (surr.)	1	%	121	96	121	129
13C5-PFHxA (surr.)	1	%	113	83	105	118
13C4-PFHpA (surr.)	1	%	120	83	114	122
13C8-PFOA (surr.)	1	%	122	79	112	122
13C5-PFNA (surr.)	1	%	140	86	129	139
13C6-PFDA (surr.)	1	%	119	92	106	104
13C2-PFUnDA (surr.)	1	%	90	143	64	68
13C2-PFDoDA (surr.)	1	%	109	128	74	75
13C2-PFTTeDA (surr.)	1	%	82	100	48	50

Client Sample ID			SX_OB_20220 412_07_45_SS _TriPLICATE_EU F	SX_OB_20220 412_07_51_SS _Primary_EUF	SX_OB_20220 412_17_17_SS _Primary_EUF	SX_OB_20220 412_17_18_SS _Duplicate_EU F
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- Ap0027894	M22- Ap0027895	M22- Ap0027896	M22- Ap0027897
Date Sampled			Apr 12, 2022	Apr 12, 2022	Apr 12, 2022	Apr 12, 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-ethylperfluorooctanesulfonamidoacetic 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	%	133	120	115	113
D3-N-MeFOSA (surr.)	1	%	119	100	140	119
D5-N-EtFOSA (surr.)	1	%	140	96	86	150
D7-N-MeFOSE (surr.)	1	%	137	100	143	114
D9-N-EtFOSE (surr.)	1	%	143	106	127	118
D5-N-EtFOSAA (surr.)	1	%	125	28	64	91
D3-N-MeFOSAA (surr.)	1	%	145	75	88	93
<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	%	114	75	112	123
18O2-PFHxS (surr.)	1	%	102	79	104	109
13C8-PFOS (surr.)	1	%	138	98	119	124
<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	%	135	134	118	127
13C2-6:2 FTSA (surr.)	1	%	133	113	130	142
13C2-8:2 FTSA (surr.)	1	%	116	119	126	117
13C2-10:2 FTSA (surr.)	1	%	116	129	96	93
<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 412_19_56_SS _Primary_EUF	SX_OB_20220 413_00_04_SS _Primary_EUF	SX_OB_20220 413_03_56_SS _Primary_EUF	SX_OB_20220 412_07_45_SS _Triuplicate_EU F
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- Ap0027898	M22- Ap0027899	M22- Ap0027900	M22- Ap0027901
Date Sampled			Apr 12, 2022	Apr 13, 2022	Apr 13, 2022	Apr 12, 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	5.1	5.1	5.1	6.4
pH (off)	0.1	pH Units	5.1	5.1	5.2	8.7
<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	%	111	116	121	98
13C5-PFPeA (surr.)	1	%	116	122	133	99
13C5-PFHxA (surr.)	1	%	109	98	107	102
13C4-PFHpA (surr.)	1	%	111	119	113	111
13C8-PFOA (surr.)	1	%	109	100	116	115
13C5-PFNA (surr.)	1	%	111	131	135	126
13C6-PFDA (surr.)	1	%	81	95	112	99
13C2-PFUnDA (surr.)	1	%	58	56	76	70
13C2-PFDoDA (surr.)	1	%	74	56	90	88
13C2-PFTeDA (surr.)	1	%	55	38	45	71
<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	%	97	98	132	129
D3-N-MeFOSA (surr.)	1	%	143	91	91	59
D5-N-EtFOSA (surr.)	1	%	86	91	89	64
D7-N-MeFOSE (surr.)	1	%	99	91	121	101
D9-N-EtFOSE (surr.)	1	%	107	93	133	101
D5-N-EtFOSAA (surr.)	1	%	58	39	63	115
D3-N-MeFOSAA (surr.)	1	%	83	72	75	79

Client Sample ID			SX_OB_20220 412_19_56_SS _Primary_EUF	SX_OB_20220 413_00_04_SS _Primary_EUF	SX_OB_20220 413_03_56_SS _Primary_EUF	SX_OB_20220 412_07_45_SS _Triuplicate_EU F
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- Ap0027898	M22- Ap0027899	M22- Ap0027900	M22- Ap0027901
Date Sampled			Apr 12, 2022	Apr 13, 2022	Apr 13, 2022	Apr 12, 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	%	119	66	110	106
18O2-PFHxS (surr.)	1	%	96	107	110	116
13C8-PFOS (surr.)	1	%	111	112	132	124
<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	%	126	146	142	139
13C2-6:2 FTSA (surr.)	1	%	129	136	139	109
13C2-8:2 FTSA (surr.)	1	%	79	79	94	94
13C2-10:2 FTSA (surr.)	1	%	81	72	110	107
<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 412_07_51_SS _Primary_EUF	SX_OB_20220 412_17_17_SS _Primary_EUF	SX_OB_20220 412_17_18_SS _Duplicate_EU F	SX_OB_20220 412_19_56_SS _Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0027902	M22- Ap0027903	M22- Ap0027904	M22- Ap0027905
Date Sampled			Apr 12, 2022	Apr 12, 2022	Apr 12, 2022	Apr 12, 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	8.4	8.7	8.8	8.2

Client Sample ID			SX_OB_20220 412_07_51_SS _Primary_EUF	SX_OB_20220 412_17_17_SS _Primary_EUF	SX_OB_20220 412_17_18_SS _Duplicate_EU F	SX_OB_20220 412_19_56_SS _Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0027902	M22- Ap0027903	M22- Ap0027904	M22- Ap0027905
Date Sampled			Apr 12, 2022	Apr 12, 2022	Apr 12, 2022	Apr 12, 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	%	107	90	110	112
13C5-PFPeA (surr.)	1	%	111	98	119	114
13C5-PFHxA (surr.)	1	%	104	90	111	116
13C4-PFHpA (surr.)	1	%	111	91	111	115
13C8-PFOA (surr.)	1	%	111	94	112	114
13C5-PFNA (surr.)	1	%	139	114	121	138
13C6-PFDA (surr.)	1	%	120	102	123	118
13C2-PFUnDA (surr.)	1	%	97	72	84	85
13C2-PFDoDA (surr.)	1	%	114	82	102	101
13C2-PFTeDA (surr.)	1	%	84	75	81	88
<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	%	147	110	128	131
D3-N-MeFOSA (surr.)	1	%	101	127	83	97
D5-N-EtFOSA (surr.)	1	%	95	133	93	81
D7-N-MeFOSE (surr.)	1	%	121	100	106	108
D9-N-EtFOSE (surr.)	1	%	134	97	115	116
D5-N-EtFOSAA (surr.)	1	%	154	84	138	119
D3-N-MeFOSAA (surr.)	1	%	138	141	118	162
<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 412_07_51_SS _Primary_EUF	SX_OB_20220 412_17_17_SS _Primary_EUF	SX_OB_20220 412_17_18_SS _Duplicate_EU F	SX_OB_20220 412_19_56_SS _Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0027902	M22- Ap0027903	M22- Ap0027904	M22- Ap0027905
Date Sampled			Apr 12, 2022	Apr 12, 2022	Apr 12, 2022	Apr 12, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>						
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	111	92	120	122
18O2-PFHxS (surr.)	1	%	110	87	97	90
13C8-PFOS (surr.)	1	%	123	108	119	120
<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	%	97	83	95	106
13C2-6:2 FTSA (surr.)	1	%	111	97	113	116
13C2-8:2 FTSA (surr.)	1	%	124	125	137	122
13C2-10:2 FTSA (surr.)	1	%	100	117	139	128
<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 413_00_04_SS _Primary_EUF	SX_OB_20220 413_03_56_SS _Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0027906	M22- Ap0027907
Date Sampled			Apr 13, 2022	Apr 13, 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	8.6	8.5
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01

Client Sample ID			SX_OB_20220 413_00_04_SS _Primary_EUF	SX_OB_20220 413_03_56_SS _Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0027906	M22- Ap0027907
Date Sampled			Apr 13, 2022	Apr 13, 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 (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	112	105
13C5-PFPeA (surr.)	1	%	122	107
13C5-PFHxA (surr.)	1	%	69	97
13C4-PFHpA (surr.)	1	%	115	109
13C8-PFOA (surr.)	1	%	103	107
13C5-PFNA (surr.)	1	%	128	136
13C6-PFDA (surr.)	1	%	101	107
13C2-PFUnDA (surr.)	1	%	72	81
13C2-PFDoDA (surr.)	1	%	93	92
13C2-PFTeDA (surr.)	1	%	87	84
<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	%	128	122
D3-N-MeFOSA (surr.)	1	%	43	43
D5-N-EtFOSA (surr.)	1	%	59	49
D7-N-MeFOSE (surr.)	1	%	86	88
D9-N-EtFOSE (surr.)	1	%	86	89
D5-N-EtFOSAA (surr.)	1	%	71	92
D3-N-MeFOSAA (surr.)	1	%	100	148
<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	%	93	105
18O2-PFHxS (surr.)	1	%	95	98
13C8-PFOS (surr.)	1	%	127	122

<b>Client Sample ID</b>			<b>SX_OB_20220 413_00_04_SS _Primary_EUF</b>	<b>SX_OB_20220 413_03_56_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- Ap0027906</b>	<b>M22- Ap0027907</b>
<b>Date Sampled</b>			<b>Apr 13, 2022</b>	<b>Apr 13, 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	%	138	118
13C2-6:2 FTSA (surr.)	1	%	116	117
13C2-8:2 FTSA (surr.)	1	%	126	107
13C2-10:2 FTSA (surr.)	1	%	127	120
<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 16, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Apr 16, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Apr 16, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 13, 2022 11:58 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	879810	<b>Due:</b>	Apr 22, 2022
<b>Project Name:</b>	20220413043532-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_20220412_07_45_S_S_Triplicate_EUF	Apr 12, 2022	7:45AM	Soil	M22-Ap0027885		X	X	X
2	SX_OB_20220412_07_51_S_S_Primary_EUF	Apr 12, 2022	7:51AM	Soil	M22-Ap0027886		X	X	X
3	SX_OB_20220412_16_09_S_R_Rinsate_EUF	Apr 12, 2022	4:09PM	Water	M22-Ap0027887			X	

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<b>Project Name:</b>	20220413043532-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_20220412_16_16_S B_Blank_EUF	Apr 12, 2022	4:16PM	Water	M22-Ap0027888			X	
5	SX_OB_20220412_17_17_S S_Primary_EUF	Apr 12, 2022	5:17PM	Soil	M22-Ap0027889		X	X	X
6	SX_OB_20220412_17_18_S S_Duplicate_EUF	Apr 12, 2022	5:18PM	Soil	M22-Ap0027890		X	X	X
7	SX_OB_20220412_19_56_S S_Primary_EUF	Apr 12, 2022	7:56PM	Soil	M22-Ap0027891		X	X	X

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 13, 2022 11:58 AM
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<b>Project Name:</b>	20220413043532-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								
8	SX_OB_20220413_00_04_S_S_Primary_EU_F	Apr 13, 2022	12:04AM	Soil	M22-Ap0027892		X	X	X
9	SX_OB_20220413_03_56_S_S_Primary_EU_F	Apr 13, 2022	3:56AM	Soil	M22-Ap0027893		X	X	X
10	SX_OB_20220412_07_45_S_S_Triplicate_EUF	Apr 12, 2022	7:45AM	AUS Leachate - pH 5.0	M22-Ap0027894	X		X	
11	SX_OB_20220412_07_51AM	Apr 12, 2022	7:51AM	AUS Leachate	M22-	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 13, 2022 11:58 AM
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<b>Project Name:</b>	20220413043532-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>									
	412_07_51_S S_Primary_EU F			- pH 5.0	Ap0027895				
12	SX_OB_20220 412_17_17_S S_Primary_EU F	Apr 12, 2022	5:17PM	AUS Leachate - pH 5.0	M22- Ap0027896	X		X	
13	SX_OB_20220 412_17_18_S S_Duplicate_E UF	Apr 12, 2022	5:18PM	AUS Leachate - pH 5.0	M22- Ap0027897	X		X	
14	SX_OB_20220 412_19_56_S S_Primary_EU	Apr 12, 2022	7:56PM	AUS Leachate - pH 5.0	M22- Ap0027898	X		X	

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<b>Project Name:</b>	20220413043532-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_20220413_00_04_S_S_Primary_EU_F	Apr 13, 2022	12:04AM	AUS Leachate - pH 5.0	M22-Ap0027899	X		X	
16	SX_OB_20220413_03_56_S_S_Primary_EU_F	Apr 13, 2022	3:56AM	AUS Leachate - pH 5.0	M22-Ap0027900	X		X	
17	SX_OB_20220412_07_45_S_S_Triplicate_EUF	Apr 12, 2022	7:45AM	AUS Leachate - Reagent Water	M22-Ap0027901	X		X	
18	SX_OB_20220	Apr 12, 2022	7:51AM	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>									
	412_07_51_S S_Primary_EU F			- Reagent Water	Ap0027902				
19	SX_OB_20220 412_17_17_S S_Primary_EU F	Apr 12, 2022	5:17PM	AUS Leachate - Reagent Water	M22- Ap0027903	X		X	
20	SX_OB_20220 412_17_18_S S_Duplicate_E UF	Apr 12, 2022	5:18PM	AUS Leachate - Reagent Water	M22- Ap0027904	X		X	
21	SX_OB_20220 412_19_56_S S_Primary_EU	Apr 12, 2022	7:56PM	AUS Leachate - Reagent Water	M22- Ap0027905	X		X	

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

**Order No.:**  
**Report #:** 879810  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Apr 13, 2022 11:58 AM  
**Due:** Apr 22, 2022  
**Priority:** 5 Day  
**Contact Name:** Agon Lab Reports (Spoil Project)

**Project Name:** 20220413043532-Eurofin-21  
**Project ID:** JC0927

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<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_20220413_00_04_S_S_Primary_EU_F	Apr 13, 2022	12:04AM	AUS Leachate - Reagent Water	M22-Ap0027906	X		X	
23	SX_OB_20220413_03_56_S_S_Primary_EU_F	Apr 13, 2022	3:56AM	AUS Leachate - Reagent Water	M22-Ap0027907	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)	%	102		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	100		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	94		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	89		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	99		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	97		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	87		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	116		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	100		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	85		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	100		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)	%	98			50-150	Pass			
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	73			50-150	Pass			
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	97			50-150	Pass			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	112			50-150	Pass			
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	53			50-150	Pass			
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	63			50-150	Pass			
<b>LCS - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>									
Perfluorobutanesulfonic acid (PFBS)	%	89			50-150	Pass			
Perfluorononanesulfonic acid (PFNS)	%	88			50-150	Pass			
Perfluoropropanesulfonic acid (PFPrS)	%	111			50-150	Pass			
Perfluoropentanesulfonic acid (PFPeS)	%	98			50-150	Pass			
Perfluorohexanesulfonic acid (PFHxS)	%	102			50-150	Pass			
Perfluoroheptanesulfonic acid (PFHpS)	%	108			50-150	Pass			
Perfluorooctanesulfonic acid (PFOS)	%	95			50-150	Pass			
Perfluorodecanesulfonic acid (PFDS)	%	79			50-150	Pass			
<b>LCS - % Recovery</b>									
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	107			50-150	Pass			
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	125			50-150	Pass			
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	121			50-150	Pass			
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	142			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-Ap0027907	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0027907	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-Ap0027907	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0027907	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0027907	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0027907	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0027907	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-Ap0027907	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0027907	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
<b>Duplicate</b>								
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
<b>Duplicate</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0027907	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0027907	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0027907	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
Richard Corner	Senior Analyst (NSW)
Glenn Jackson	Senior Analyst (NSW)
Scott Beddoes	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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Fullarton  
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NATA Accredited  
Accreditation Number 1261  
Site Number 1254

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equivalence of testing, medical testing, calibration,  
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reference materials producers reports and certificates.

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

Report **879810-S**  
Project name **20220413043532-Eurofin-21**  
Project ID **JC0927**  
Received Date **Apr 13, 2022**

Client Sample ID			SX_OB_20220 412_07_45_SS _TriPLICATE_EU F	SX_OB_20220 412_07_51_SS _Primary_EUF	SX_OB_20220 412_17_17_SS _Primary_EUF	SX_OB_20220 412_17_18_SS _Duplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0027885	M22- Ap0027886	M22- Ap0027889	M22- Ap0027890
Date Sampled			Apr 12, 2022	Apr 12, 2022	Apr 12, 2022	Apr 12, 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 412_07_45_SS _Triuplicate_EU F	SX_OB_20220 412_07_51_SS _Primary_EUF	SX_OB_20220 412_17_17_SS _Primary_EUF	SX_OB_20220 412_17_18_SS _Duplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0027885	M22- Ap0027886	M22- Ap0027889	M22- Ap0027890
Date Sampled			Apr 12, 2022	Apr 12, 2022	Apr 12, 2022	Apr 12, 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	%	57	66	52	55
Toluene-d8 (surr.)	1	%	59	61	55	59
<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 412_07_45_SS _TriPLICATE_EU F	SX_OB_20220 412_07_51_SS _Primary_EUF	SX_OB_20220 412_17_17_SS _Primary_EUF	SX_OB_20220 412_17_18_SS _Duplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0027885	M22- Ap0027886	M22- Ap0027889	M22- Ap0027890
Date Sampled			Apr 12, 2022	Apr 12, 2022	Apr 12, 2022	Apr 12, 2022
Test/Reference	LOR	Unit				
<b>Polycyclic Aromatic Hydrocarbons</b>						
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	85	96	64	89
p-Terphenyl-d14 (surr.)	1	%	88	92	67	88
<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	%	93	88	53	79
Tetrachloro-m-xylene (surr.)	1	%	133	138	56	112



Client Sample ID			SX_OB_20220 412_07_45_SS _TriPLICATE_EU F	SX_OB_20220 412_07_51_SS _Primary_EUF	SX_OB_20220 412_17_17_SS _Primary_EUF	SX_OB_20220 412_17_18_SS _Duplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0027885	M22- Ap0027886	M22- Ap0027889	M22- Ap0027890
Date Sampled			Apr 12, 2022	Apr 12, 2022	Apr 12, 2022	Apr 12, 2022
Test/Reference	LOR	Unit				
<b>Polychlorinated Biphenyls</b>						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	93	88	53	79
Tetrachloro-m-xylene (surr.)	1	%	133	138	56	112
<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	%	78	88	41	77
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
<b>Chromium (hexavalent)</b>						
Chromium (hexavalent)	1	mg/kg	1.1	< 1	< 1	1.4
<b>Cyanide (total)</b>						
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
<b>Fluoride (Total)</b>						
Fluoride (Total)	100	mg/kg	440	340	< 100	450
<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	7.7	6.9	8.4	8.7
<b>% Moisture</b>						
% Moisture	1	%	29	24	26	25
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	60	42	46	51
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	200	110	130	140
Copper	5	mg/kg	78	63	63	66
Lead	5	mg/kg	< 5	< 5	5.2	5.0
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_OB_20220 412_07_45_SS _TriPLICATE_EU F	SX_OB_20220 412_07_51_SS _Primary_EUF	SX_OB_20220 412_17_17_SS _Primary_EUF	SX_OB_20220 412_17_18_SS _Duplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0027885	M22- Ap0027886	M22- Ap0027889	M22- Ap0027890
Date Sampled			Apr 12, 2022	Apr 12, 2022	Apr 12, 2022	Apr 12, 2022
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	240	180	190	210
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	140	110	110	120
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (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	96	95	94
13C5-PFPeA (surr.)	1	%	107	113	104	117
13C5-PFHxA (surr.)	1	%	92	98	93	95
13C4-PFHpA (surr.)	1	%	94	94	91	88
13C8-PFOA (surr.)	1	%	93	116	106	97
13C5-PFNA (surr.)	1	%	75	70	86	98
13C6-PFDA (surr.)	1	%	98	77	103	109
13C2-PFUnDA (surr.)	1	%	131	119	116	117
13C2-PFDoDA (surr.)	1	%	102	102	99	86
13C2-PFTeDA (surr.)	1	%	62	67	60	74
<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	%	89	84	97	87
D3-N-MeFOSA (surr.)	1	%	103	110	118	103
D5-N-EtFOSA (surr.)	1	%	125	123	123	121
D7-N-MeFOSE (surr.)	1	%	91	78	83	78
D9-N-EtFOSE (surr.)	1	%	99	102	102	98
D5-N-EtFOSAA (surr.)	1	%	148	84	112	119
D3-N-MeFOSAA (surr.)	1	%	111	136	136	111

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0027885	M22- Ap0027886	M22- Ap0027889	M22- Ap0027890
Date Sampled			Apr 12, 2022	Apr 12, 2022	Apr 12, 2022	Apr 12, 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	%	80	86	80	84
18O2-PFHxS (surr.)	1	%	70	73	76	78
13C8-PFOS (surr.)	1	%	82	68	86	83
<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	%	121	118	128	130
13C2-6:2 FTSA (surr.)	1	%	78	93	119	98
13C2-8:2 FTSA (surr.)	1	%	84	70	85	87
13C2-10:2 FTSA (surr.)	1	%	125	134	106	139
<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 412_19_56_SS _Primary_EUF	SX_OB_20220 413_00_04_SS _Primary_EUF	SX_OB_20220 413_03_56_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0027891	M22- Ap0027892	M22- Ap0027893
Date Sampled			Apr 12, 2022	Apr 13, 2022	Apr 13, 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	< 20	< 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
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20

Client Sample ID			SX_OB_20220 412_19_56_SS _Primary_EUF	SX_OB_20220 413_00_04_SS _Primary_EUF	SX_OB_20220 413_03_56_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0027891	M22- Ap0027892	M22- Ap0027893
Date Sampled			Apr 12, 2022	Apr 13, 2022	Apr 13, 2022
Test/Reference	LOR	Unit			
<b>Total Recoverable Hydrocarbons</b>					
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
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			SX_OB_20220 412_19_56_SS _Primary_EUF	SX_OB_20220 413_00_04_SS _Primary_EUF	SX_OB_20220 413_03_56_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0027891	M22- Ap0027892	M22- Ap0027893
Date Sampled			Apr 12, 2022	Apr 13, 2022	Apr 13, 2022
Test/Reference	LOR	Unit			
<b>Volatile Organics</b>					
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	%	61	50	57
Toluene-d8 (surr.)	1	%	63	58	53
<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	%	65	59	90
p-Terphenyl-d14 (surr.)	1	%	83	90	88

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Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0027891	M22- Ap0027892	M22- Ap0027893
Date Sampled			Apr 12, 2022	Apr 13, 2022	Apr 13, 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	%	78	89	104
Tetrachloro-m-xylene (surr.)	1	%	82	90	106
<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	%	78	89	104
Tetrachloro-m-xylene (surr.)	1	%	82	90	106
<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 412_19_56_SS _Primary_EUF	SX_OB_20220 413_00_04_SS _Primary_EUF	SX_OB_20220 413_03_56_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0027891	M22- Ap0027892	M22- Ap0027893
Date Sampled			Apr 12, 2022	Apr 13, 2022	Apr 13, 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	%	80	33	68
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20
<b>Chromium (hexavalent)</b>					
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1
<b>Cyanide (total)</b>					
Cyanide (total)	5	mg/kg	< 5	< 5	< 5
<b>Fluoride (Total)</b>					
Fluoride (Total)	100	mg/kg	360	280	620
<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	8.1	9.1	8.0
<b>% Moisture</b>					
% Moisture	1	%	30	37	31
<b>Heavy Metals</b>					
Arsenic	2	mg/kg	63	49	44
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	260	130	110
Copper	5	mg/kg	92	94	64
Lead	5	mg/kg	< 5	6.1	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5
Nickel	5	mg/kg	330	260	200
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	180	160	130
<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 (PFTTrDA) <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	87	93
13C5-PFPeA (surr.)	1	%	109	113	112
13C5-PFHxA (surr.)	1	%	94	93	99

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Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0027891	M22- Ap0027892	M22- Ap0027893
Date Sampled			Apr 12, 2022	Apr 13, 2022	Apr 13, 2022
Test/Reference	LOR	Unit			
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>					
13C4-PFHpA (surr.)	1	%	85	91	96
13C8-PFOA (surr.)	1	%	99	89	111
13C5-PFNA (surr.)	1	%	100	99	83
13C6-PFDA (surr.)	1	%	108	104	119
13C2-PFUnDA (surr.)	1	%	112	131	120
13C2-PFDoDA (surr.)	1	%	101	95	105
13C2-PFTeDA (surr.)	1	%	74	78	70
<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	%	96	105	98
D3-N-MeFOSA (surr.)	1	%	100	104	101
D5-N-EtFOSA (surr.)	1	%	123	106	123
D7-N-MeFOSE (surr.)	1	%	87	84	92
D9-N-EtFOSE (surr.)	1	%	96	90	112
D5-N-EtFOSAA (surr.)	1	%	103	114	100
D3-N-MeFOSAA (surr.)	1	%	110	108	115
<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	%	81	78	85
18O2-PFHxS (surr.)	1	%	73	74	77
13C8-PFOS (surr.)	1	%	81	88	56
<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	%	113	145	106
13C2-6:2 FTSA (surr.)	1	%	106	105	92



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Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0027891	M22- Ap0027892	M22- Ap0027893
Date Sampled			Apr 12, 2022	Apr 13, 2022	Apr 13, 2022
Test/Reference	LOR	Unit			
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>					
13C2-8:2 FTSA (surr.)	1	%	85	86	83
13C2-10:2 FTSA (surr.)	1	%	28	149	129
<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 13, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Apr 13, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Apr 13, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	Apr 13, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	Apr 13, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Apr 13, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	Apr 13, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	Apr 13, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Apr 13, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Apr 13, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection - Method: LTM-INO-4230 Hexavalent Chromium by UV-Vis	Melbourne	Apr 13, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	Apr 13, 2022	14 Days
Fluoride (Total) - Method: LTM-INO-4150 Determination of Total Fluoride PART B – ISE - Method: LTM-INO-4150 Determination of Total Fluoride PART A – CIC	Melbourne	Apr 14, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Apr 13, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	Apr 13, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Apr 13, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	

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<b>Project Name:</b>	20220413043532-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_20220412_07_45_S_S_Triplicate_EUF	Apr 12, 2022	7:45AM	Soil	M22-Ap0027885		X	X	X
2	SX_OB_20220412_07_51_S_S_Primary_EUF	Apr 12, 2022	7:51AM	Soil	M22-Ap0027886		X	X	X
3	SX_OB_20220412_16_09_S_R_Rinsate_EUF	Apr 12, 2022	4:09PM	Water	M22-Ap0027887			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>									
4	SX_OB_20220412_16_16_S B_Blank_EUF	Apr 12, 2022	4:16PM	Water	M22-Ap0027888			X	
5	SX_OB_20220412_17_17_S S_Primary_EUF	Apr 12, 2022	5:17PM	Soil	M22-Ap0027889		X	X	X
6	SX_OB_20220412_17_18_S S_Duplicate_EUF	Apr 12, 2022	5:18PM	Soil	M22-Ap0027890		X	X	X
7	SX_OB_20220412_19_56_S S_Primary_EU	Apr 12, 2022	7:56PM	Soil	M22-Ap0027891		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>									
	F								
8	SX_OB_20220413_00_04_S_S_Primary_EU_F	Apr 13, 2022	12:04AM	Soil	M22-Ap0027892		X	X	X
9	SX_OB_20220413_03_56_S_S_Primary_EU_F	Apr 13, 2022	3:56AM	Soil	M22-Ap0027893		X	X	X
10	SX_OB_20220412_07_45_S_S_Triplicate_EUF	Apr 12, 2022	7:45AM	AUS Leachate - pH 5.0	M22-Ap0027894	X		X	
11	SX_OB_20220412_07_51AM	Apr 12, 2022	7:51AM	AUS Leachate	M22-	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	412_07_51_S S_Primary_EU F			- pH 5.0	Ap0027895				
12	SX_OB_20220 412_17_17_S S_Primary_EU F	Apr 12, 2022	5:17PM	AUS Leachate - pH 5.0	M22- Ap0027896	X		X	
13	SX_OB_20220 412_17_18_S S_Duplicate_E UF	Apr 12, 2022	5:18PM	AUS Leachate - pH 5.0	M22- Ap0027897	X		X	
14	SX_OB_20220 412_19_56_S S_Primary_EU	Apr 12, 2022	7:56PM	AUS Leachate - pH 5.0	M22- Ap0027898	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_20220413_00_04_S_S_Primary_EU_F	Apr 13, 2022	12:04AM	AUS Leachate - pH 5.0	M22-Ap0027899	X		X	
16	SX_OB_20220413_03_56_S_S_Primary_EU_F	Apr 13, 2022	3:56AM	AUS Leachate - pH 5.0	M22-Ap0027900	X		X	
17	SX_OB_20220412_07_45_S_S_Triplicate_EUF	Apr 12, 2022	7:45AM	AUS Leachate - Reagent Water	M22-Ap0027901	X		X	
18	SX_OB_20220	Apr 12, 2022	7:51AM	AUS Leachate	M22-	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	412_07_51_S S_Primary_EU F			- Reagent Water	Ap0027902				
19	SX_OB_20220 412_17_17_S S_Primary_EU F	Apr 12, 2022	5:17PM	AUS Leachate - Reagent Water	M22- Ap0027903	X		X	
20	SX_OB_20220 412_17_18_S S_Duplicate_E UF	Apr 12, 2022	5:18PM	AUS Leachate - Reagent Water	M22- Ap0027904	X		X	
21	SX_OB_20220 412_19_56_S S_Primary_EU	Apr 12, 2022	7:56PM	AUS Leachate - Reagent Water	M22- Ap0027905	X		X	



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<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	F								
22	SX_OB_20220413_00_04_S_S_Primary_EU_F	Apr 13, 2022	12:04AM	AUS Leachate - Reagent Water	M22-Ap0027906	X		X	
23	SX_OB_20220413_03_56_S_S_Primary_EU_F	Apr 13, 2022	3:56AM	AUS Leachate - Reagent Water	M22-Ap0027907	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	%	91		70-130	Pass	
Naphthalene	%	82		70-130	Pass	
TRH C6-C10	%	92		70-130	Pass	
TRH >C10-C16	%	91		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Volatile Organics</b>						
1.1-Dichloroethene	%	79		70-130	Pass	
1.1.1-Trichloroethane	%	90		70-130	Pass	
1.2-Dichlorobenzene	%	99		70-130	Pass	
1.2-Dichloroethane	%	91		70-130	Pass	
Benzene	%	86		70-130	Pass	
Ethylbenzene	%	78		70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	79			70-130	Pass	
Toluene	%	83			70-130	Pass	
Trichloroethene	%	86			70-130	Pass	
Xylenes - Total*	%	79			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	%	107			70-130	Pass	
Acenaphthylene	%	117			70-130	Pass	
Anthracene	%	114			70-130	Pass	
Benz(a)anthracene	%	79			70-130	Pass	
Benzo(a)pyrene	%	106			70-130	Pass	
Benzo(b&i)fluoranthene	%	77			70-130	Pass	
Benzo(g,h,i)perylene	%	95			70-130	Pass	
Benzo(k)fluoranthene	%	125			70-130	Pass	
Chrysene	%	107			70-130	Pass	
Dibenz(a,h)anthracene	%	97			70-130	Pass	
Fluoranthene	%	101			70-130	Pass	
Fluorene	%	112			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	94			70-130	Pass	
Naphthalene	%	98			70-130	Pass	
Phenanthrene	%	98			70-130	Pass	
Pyrene	%	108			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Organochlorine Pesticides</b>							
Chlordanes - Total	%	75			70-130	Pass	
4,4'-DDD	%	123			70-130	Pass	
4,4'-DDE	%	84			70-130	Pass	
4,4'-DDT	%	72			70-130	Pass	
a-HCH	%	123			70-130	Pass	
Aldrin	%	74			70-130	Pass	
b-HCH	%	95			70-130	Pass	
d-HCH	%	95			70-130	Pass	
Dieldrin	%	74			70-130	Pass	
Endosulfan I	%	77			70-130	Pass	
Endosulfan II	%	84			70-130	Pass	
Endosulfan sulphate	%	82			70-130	Pass	
Endrin	%	84			70-130	Pass	
Endrin aldehyde	%	85			70-130	Pass	
Endrin ketone	%	74			70-130	Pass	
g-HCH (Lindane)	%	85			70-130	Pass	
Heptachlor	%	80			70-130	Pass	
Heptachlor epoxide	%	72			70-130	Pass	
Hexachlorobenzene	%	76			70-130	Pass	
Methoxychlor	%	120			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polychlorinated Biphenyls</b>							
Aroclor-1260	%	110			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Phenols (Halogenated)</b>							
2-Chlorophenol	%	95			25-140	Pass	
2,4-Dichlorophenol	%	95			25-140	Pass	
2,4,5-Trichlorophenol	%	110			25-140	Pass	
2,4,6-Trichlorophenol	%	88			25-140	Pass	
2,6-Dichlorophenol	%	85			25-140	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4-Chloro-3-methylphenol	%	105			25-140	Pass	
Pentachlorophenol	%	80			25-140	Pass	
Tetrachlorophenols - Total	%	83			25-140	Pass	
<b>LCS - % Recovery</b>							
<b>Phenols (non-Halogenated)</b>							
2-Cyclohexyl-4,6-dinitrophenol	%	59			25-140	Pass	
2-Methyl-4,6-dinitrophenol	%	46			25-140	Pass	
2-Nitrophenol	%	99			25-140	Pass	
2,4-Dimethylphenol	%	113			25-140	Pass	
2,4-Dinitrophenol	%	51			25-140	Pass	
2-Methylphenol (o-Cresol)	%	78			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	115			25-140	Pass	
4-Nitrophenol	%	90			25-140	Pass	
Dinoseb	%	65			25-140	Pass	
Phenol	%	102			25-140	Pass	
<b>LCS - % Recovery</b>							
Chromium (hexavalent)	%	96			70-130	Pass	
Cyanide (total)	%	107			70-130	Pass	
Fluoride (Total)	%	106			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Heavy Metals</b>							
Arsenic	%	106			80-120	Pass	
Cadmium	%	106			80-120	Pass	
Chromium	%	103			80-120	Pass	
Copper	%	104			80-120	Pass	
Lead	%	115			80-120	Pass	
Mercury	%	105			80-120	Pass	
Molybdenum	%	108			80-120	Pass	
Nickel	%	98			80-120	Pass	
Selenium	%	104			80-120	Pass	
Silver	%	112			80-120	Pass	
Tin	%	106			80-120	Pass	
Zinc	%	101			80-120	Pass	
<b>LCS - % Recovery</b>							
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>							
Perfluorobutanoic acid (PFBA)	%	90			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	98			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	89			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	96			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	90			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	137			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	107			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	113			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	107			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	130			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	112			50-150	Pass	
<b>LCS - % Recovery</b>							
<b>Perfluoroalkyl sulfonamido substances</b>							
Perfluorooctane sulfonamide (FOSA)	%	100			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	112			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	100			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)	%	97			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	81			50-150	Pass	



Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	95			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	89			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	106			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	120			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	73			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	86			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	50			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	101			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	115			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)	%	103			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	107			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	129			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	129			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-Ap0042515	NCP	%	109		70-130	Pass	
TRH C10-C14	M22-Ap0025517	NCP	%	122		70-130	Pass	
Naphthalene	M22-Ap0042515	NCP	%	93		70-130	Pass	
TRH C6-C10	M22-Ap0042515	NCP	%	104		70-130	Pass	
TRH >C10-C16	M22-Ap0025517	NCP	%	121		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Volatile Organics</b>				Result 1				
1.1-Dichloroethene	M22-Ap0042515	NCP	%	74		70-130	Pass	
1.1.1-Trichloroethane	M22-Ap0042515	NCP	%	74		70-130	Pass	
1.2-Dichlorobenzene	M22-Ap0042515	NCP	%	102		70-130	Pass	
1.2-Dichloroethane	M22-Ap0042515	NCP	%	114		70-130	Pass	
Benzene	M22-Ap0042515	NCP	%	109		70-130	Pass	
Ethylbenzene	M22-Ap0042515	NCP	%	108		70-130	Pass	
m&p-Xylenes	M22-Ap0042515	NCP	%	108		70-130	Pass	
o-Xylene	M22-Ap0042515	NCP	%	106		70-130	Pass	
Toluene	M22-Ap0042515	NCP	%	109		70-130	Pass	
Trichloroethene	M22-Ap0042515	NCP	%	112		70-130	Pass	
Xylenes - Total*	M22-Ap0042515	NCP	%	107		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1				
Acenaphthene	M22-Ap0030409	NCP	%	97		70-130	Pass	
Acenaphthylene	M22-Ap0030409	NCP	%	98		70-130	Pass	
Anthracene	M22-Ap0030409	NCP	%	107		70-130	Pass	
Benz(a)anthracene	M22-Ap0030409	NCP	%	86		70-130	Pass	
Benzo(a)pyrene	M22-Ap0030409	NCP	%	94		70-130	Pass	
Benzo(b&j)fluoranthene	M22-Ap0030409	NCP	%	73		70-130	Pass	
Benzo(g,h,i)perylene	M22-Ap0030409	NCP	%	74		70-130	Pass	
Benzo(k)fluoranthene	M22-Ap0030409	NCP	%	102		70-130	Pass	
Chrysene	M22-Ap0030409	NCP	%	96		70-130	Pass	
Dibenz(a,h)anthracene	M22-Ap0030409	NCP	%	79		70-130	Pass	
Fluoranthene	M22-Ap0030409	NCP	%	113		70-130	Pass	
Fluorene	M22-Ap0030409	NCP	%	97		70-130	Pass	
Indeno(1.2.3-cd)pyrene	M22-Ap0030409	NCP	%	77		70-130	Pass	
Naphthalene	M22-Ap0030409	NCP	%	84		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Phenanthrene	M22-Ap0030409	NCP	%	105		70-130	Pass	
Pyrene	M22-Ap0030409	NCP	%	119		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Organochlorine Pesticides</b>				Result 1				
Chlordanes - Total	M22-Ap0023869	NCP	%	90		70-130	Pass	
4.4'-DDD	M22-Ap0023869	NCP	%	123		70-130	Pass	
4.4'-DDE	M22-Ap0023869	NCP	%	99		70-130	Pass	
4.4'-DDT	M22-Ap0023869	NCP	%	80		70-130	Pass	
a-HCH	M22-Ap0023869	NCP	%	114		70-130	Pass	
Aldrin	M22-Ap0023869	NCP	%	86		70-130	Pass	
b-HCH	M22-Ap0023869	NCP	%	123		70-130	Pass	
d-HCH	M22-Ap0023869	NCP	%	85		70-130	Pass	
Dieldrin	M22-Ap0023869	NCP	%	87		70-130	Pass	
Endosulfan I	M22-Ap0023869	NCP	%	88		70-130	Pass	
Endosulfan II	M22-Ap0023869	NCP	%	87		70-130	Pass	
Endosulfan sulphate	M22-Ap0023869	NCP	%	123		70-130	Pass	
Endrin	M22-Ap0023869	NCP	%	93		70-130	Pass	
Endrin aldehyde	M22-Ap0023869	NCP	%	75		70-130	Pass	
Endrin ketone	M22-Ap0023869	NCP	%	80		70-130	Pass	
g-HCH (Lindane)	M22-Ap0023869	NCP	%	124		70-130	Pass	
Heptachlor	M22-Ap0023869	NCP	%	78		70-130	Pass	
Heptachlor epoxide	M22-Ap0023869	NCP	%	92		70-130	Pass	
Hexachlorobenzene	M22-Ap0023869	NCP	%	77		70-130	Pass	
Methoxychlor	M22-Ap0023869	NCP	%	85		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Polychlorinated Biphenyls</b>				Result 1				
Aroclor-1016	M22-Ap0031213	NCP	%	74		70-130	Pass	
Aroclor-1260	M22-Ap0031213	NCP	%	112		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (Halogenated)</b>				Result 1				
2-Chlorophenol	M22-Ap0030409	NCP	%	80		30-130	Pass	
2,4-Dichlorophenol	M22-Ap0030409	NCP	%	75		30-130	Pass	
2,4,5-Trichlorophenol	M22-Ap0030409	NCP	%	85		30-130	Pass	
2,4,6-Trichlorophenol	M22-Ap0023877	NCP	%	65		30-130	Pass	
2,6-Dichlorophenol	M22-Ap0030409	NCP	%	66		30-130	Pass	
4-Chloro-3-methylphenol	M22-Ap0030409	NCP	%	84		30-130	Pass	
Pentachlorophenol	M22-Ap0030409	NCP	%	54		30-130	Pass	
Tetrachlorophenols - Total	M22-Ap0030409	NCP	%	72		30-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (non-Halogenated)</b>				Result 1				
2-Cyclohexyl-4,6-dinitrophenol	M22-Ap0023985	NCP	%	58		30-130	Pass	
2-Methyl-4,6-dinitrophenol	M22-Ap0023985	NCP	%	60		30-130	Pass	
2-Nitrophenol	M22-Ap0030409	NCP	%	81		30-130	Pass	
2,4-Dimethylphenol	M22-Ap0030409	NCP	%	97		30-130	Pass	
2,4-Dinitrophenol	M22-Ap0023985	NCP	%	38		30-130	Pass	
2-Methylphenol (o-Cresol)	M22-Ap0030409	NCP	%	67		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-Ap0030409	NCP	%	96		30-130	Pass	
4-Nitrophenol	M22-Ap0030409	NCP	%	74		30-130	Pass	
Dinoseb	M22-Ap0030409	NCP	%	37		30-130	Pass	
Phenol	M22-Ap0030409	NCP	%	84		30-130	Pass	
<b>Spike - % Recovery</b>								
				Result 1				
Chromium (hexavalent)	M22-Ap0035967	NCP	%	87		70-130	Pass	
Fluoride (Total)	M22-Ap0020888	NCP	%	83		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Arsenic	M22-Ap0029331	NCP	%	105		75-125	Pass	
Cadmium	M22-Ap0029331	NCP	%	86		75-125	Pass	
Chromium	M22-Ap0029331	NCP	%	98		75-125	Pass	
Copper	M22-Ap0029331	NCP	%	99		75-125	Pass	
Lead	M22-Ap0029331	NCP	%	119		75-125	Pass	
Mercury	M22-Ap0029331	NCP	%	123		75-125	Pass	
Molybdenum	M22-Ap0029331	NCP	%	112		75-125	Pass	
Nickel	M22-Ap0029331	NCP	%	98		75-125	Pass	
Selenium	M22-Ap0029331	NCP	%	102		75-125	Pass	
Silver	M22-Ap0029331	NCP	%	89		75-125	Pass	
Tin	M22-Ap0029331	NCP	%	111		75-125	Pass	
Zinc	M22-Ap0029331	NCP	%	103		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1				
Perfluorobutanoic acid (PFBA)	M22-Ap0025668	NCP	%	93		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ap0025668	NCP	%	104		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ap0025668	NCP	%	94		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ap0025668	NCP	%	98		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ap0025668	NCP	%	101		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ap0025668	NCP	%	115		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ap0025668	NCP	%	116		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0025668	NCP	%	119		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ap0025668	NCP	%	111		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	M22-Ap0025668	NCP	%	130		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0025668	NCP	%	99		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1				
Perfluorooctane sulfonamide (FOSA)	M22-Ap0025668	NCP	%	111		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0025668	NCP	%	120		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0025668	NCP	%	115		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0025668	NCP	%	112		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0025668	NCP	%	96		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ap0025668	NCP	%	88		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0025668	NCP	%	85		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>				Result 1				
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0025668	NCP	%	86		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ap0025668	NCP	%	125		50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0025668	NCP	%	119		50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0025668	NCP	%	88		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0025668	NCP	%	97			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0025668	NCP	%	54			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0025668	NCP	%	98			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0025668	NCP	%	117			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-Ap0025668	NCP	%	106			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0025668	NCP	%	84			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0025668	NCP	%	141			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0025668	NCP	%	102			50-150	Pass	
<b>Spike - % Recovery</b>									
				Result 1					
Cyanide (total)	M22-Ma65329	NCP	%	75			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 C6-C9	M22-Ap0030616	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	B22-Ap0012637	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	B22-Ap0012637	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	B22-Ap0012637	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Naphthalene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M22-Ap0030616	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	B22-Ap0012637	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	B22-Ap0012637	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	B22-Ap0012637	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
<b>Duplicate</b>									
<b>Volatile Organics</b>				Result 1	Result 2	RPD			
Hexachlorobutadiene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
<b>Duplicate</b>									
<b>Volatile Organics</b>				Result 1	Result 2	RPD			
1.1-Dichloroethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1,4-Dichlorobenzene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzene	M22-Ap0030616	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Bromobenzene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1,2-Dichloroethene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1,3-Dichloropropene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	M22-Ap0030616	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	M22-Ap0030616	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	M22-Ap0030616	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	M22-Ap0030616	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1,2-Dichloroethene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,3-Dichloropropene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-Ap0030616	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total*	M22-Ap0030616	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1	Result 2	RPD		
Phenanthrene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
<b>Organochlorine Pesticides</b>				Result 1	Result 2	RPD		
Chlordanes - Total	M22-Ap0027885	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-Ap0027885	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
<b>Polychlorinated Biphenyls</b>				Result 1	Result 2	RPD		
Aroclor-1016	M22-Ap0027885	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-Ap0027885	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-Ap0027885	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-Ap0027885	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-Ap0027885	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-Ap0027885	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-Ap0027885	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-Ap0027885	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
<b>Phenols (Halogenated)</b>				Result 1	Result 2	RPD		
2-Chlorophenol	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M22-Ap0027885	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M22-Ap0027885	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-Ap0027885	CP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-Ap0027885	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-Ap0027885	CP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
<b>Phenols (non-Halogenated)</b>				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	M22-Ap0027885	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M22-Ap0027885	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-Ap0027885	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	M22-Ap0027885	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-Ap0027885	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-Ap0027885	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass

<b>Duplicate</b>								
<b>Phenols (non-Halogenated)</b>				Result 1	Result 2	RPD		
4-Nitrophenol	M22-Ap0027885	CP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-Ap0027885	CP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-Ap0027885	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
<b>Duplicate</b>								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-Ap0032743	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Cyanide (total)	M22-Ap0020458	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Fluoride (Total)	M22-Ap0024515	NCP	mg/kg	590	560	6.0	30%	Pass
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Ap0024184	NCP	pH Units	8.1	8.1	pass	30%	Pass
% Moisture	M22-Ap0027776	NCP	%	11	9.0	21	30%	Pass
<b>Duplicate</b>								
<b>Heavy Metals</b>				Result 1	Result 2	RPD		
Arsenic	M22-Ap0026631	NCP	mg/kg	8.2	8.6	4.0	30%	Pass
Cadmium	M22-Ap0026631	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M22-Ap0026631	NCP	mg/kg	48	48	1.0	30%	Pass
Copper	M22-Ap0026631	NCP	mg/kg	59	59	1.0	30%	Pass
Lead	M22-Ap0026631	NCP	mg/kg	34	35	3.0	30%	Pass
Mercury	M22-Ap0026631	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M22-Ap0026631	NCP	mg/kg	< 5	5.1	5.0	30%	Pass
Nickel	M22-Ap0026631	NCP	mg/kg	150	150	1.0	30%	Pass
Selenium	M22-Ap0026631	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M22-Ap0026631	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-Ap0026631	NCP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M22-Ap0026631	NCP	mg/kg	120	120	1.0	30%	Pass
<b>Duplicate</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotridecanoic acid (PFTTrDA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
<b>Duplicate</b>								
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ap0025667	NCP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0025667	NCP	ug/kg	< 10	< 10	<1	30%	Pass

<b>Duplicate</b>									
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0025667	NCP	ug/kg	7.2	5.3	31	30%	Fail	Q15
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0025667	NCP	ug/kg	55	51	8.0	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
<b>Duplicate</b>									
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0025667	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0025667	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0025667	NCP	ug/kg	< 5	< 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).
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
Linda Chourman	Senior Analyst (NSW)
Mary Makarios	Senior Analyst (NSW)
Scott Beddoes	Senior Analyst (NSW)
Glenn Jackson	Senior Analyst (NSW)
Alex Petridis	Senior Analyst (NSW)
Richard Corner	Senior Analyst (NSW)
Vivian Wang	Senior Analyst (VIC)
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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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** 879810-W  
Project name 20220413043532-Eurofin-21  
Project ID JC0927  
Received Date Apr 13, 2022

Client Sample ID			SX_OB_20220 412_16_09_SR _Rinsate_EUF	SX_OB_20220 412_16_16_SB _Blank_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22- Ap0027887	M22- Ap0027888
Date Sampled			Apr 12, 2022	Apr 12, 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	%	82	76
13C5-PFPeA (surr.)	1	%	96	91
13C5-PFHxA (surr.)	1	%	99	97
13C4-PFHpA (surr.)	1	%	85	79
13C8-PFOA (surr.)	1	%	88	73
13C5-PFNA (surr.)	1	%	79	67
13C6-PFDA (surr.)	1	%	87	78
13C2-PFUnDA (surr.)	1	%	70	68
13C2-PFDoDA (surr.)	1	%	62	52
13C2-PFTeDA (surr.)	1	%	108	90
<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	%	76	68

Client Sample ID			SX_OB_20220 412_16_09_SR _Rinsate_EUF	SX_OB_20220 412_16_16_SB _Blank_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22- Ap0027887	M22- Ap0027888
Date Sampled			Apr 12, 2022	Apr 12, 2022
Test/Reference	LOR	Unit		
<b>Perfluoroalkyl sulfonamido substances</b>				
D3-N-MeFOSA (surr.)	1	%	39	40
D5-N-EtFOSA (surr.)	1	%	44	48
D7-N-MeFOSE (surr.)	1	%	62	57
D9-N-EtFOSE (surr.)	1	%	55	49
D5-N-EtFOSAA (surr.)	1	%	84	68
D3-N-MeFOSAA (surr.)	1	%	107	93
<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	%	102	95
18O2-PFHxS (surr.)	1	%	87	75
13C8-PFOS (surr.)	1	%	83	71
<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	%	121	101
13C2-6:2 FTSA (surr.)	1	%	128	95
13C2-8:2 FTSA (surr.)	1	%	113	99
13C2-10:2 FTSA (surr.)	1	%	94	88
<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.

<b>Description</b>	<b>Testing Site</b>	<b>Extracted</b>	<b>Holding Time</b>
<b>Per- and Polyfluoroalkyl Substances (PFASs)</b>			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 13, 2022	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 13, 2022 11:58 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	879810	<b>Due:</b>	Apr 22, 2022
<b>Project Name:</b>	20220413043532-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_20220412_07_45_S_S_Triplicate_EUF	Apr 12, 2022	7:45AM	Soil	M22-Ap0027885		X	X	X
2	SX_OB_20220412_07_51_S_S_Primary_EUF	Apr 12, 2022	7:51AM	Soil	M22-Ap0027886		X	X	X
3	SX_OB_20220412_16_09_S_R_Rinsate_EUF	Apr 12, 2022	4:09PM	Water	M22-Ap0027887			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_20220412_16_16_S B_Blank_EUF	Apr 12, 2022	4:16PM	Water	M22-Ap0027888			X	
5	SX_OB_20220412_17_17_S S_Primary_EUF	Apr 12, 2022	5:17PM	Soil	M22-Ap0027889		X	X	X
6	SX_OB_20220412_17_18_S S_Duplicate_EUF	Apr 12, 2022	5:18PM	Soil	M22-Ap0027890		X	X	X
7	SX_OB_20220412_19_56_S S_Primary_EU	Apr 12, 2022	7:56PM	Soil	M22-Ap0027891		X	X	X

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<b>Project Name:</b>	20220413043532-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								
8	SX_OB_20220413_00_04_S_S_Primary_EU_F	Apr 13, 2022	12:04AM	Soil	M22-Ap0027892		X	X	X
9	SX_OB_20220413_03_56_S_S_Primary_EU_F	Apr 13, 2022	3:56AM	Soil	M22-Ap0027893		X	X	X
10	SX_OB_20220412_07_45_S_S_Triplicate_EUF	Apr 12, 2022	7:45AM	AUS Leachate - pH 5.0	M22-Ap0027894	X		X	
11	SX_OB_20220412_07_45_S_S_Triplicate_EUF	Apr 12, 2022	7:51AM	AUS Leachate	M22-	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 13, 2022 11:58 AM
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<b>Project Name:</b>	20220413043532-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>									
	412_07_51_S S_Primary_EU F			- pH 5.0	Ap0027895				
12	SX_OB_20220 412_17_17_S S_Primary_EU F	Apr 12, 2022	5:17PM	AUS Leachate - pH 5.0	M22- Ap0027896	X		X	
13	SX_OB_20220 412_17_18_S S_Duplicate_E UF	Apr 12, 2022	5:18PM	AUS Leachate - pH 5.0	M22- Ap0027897	X		X	
14	SX_OB_20220 412_19_56_S S_Primary_EU	Apr 12, 2022	7:56PM	AUS Leachate - pH 5.0	M22- Ap0027898	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_20220413_00_04_S_S_Primary_EU_F	Apr 13, 2022	12:04AM	AUS Leachate - pH 5.0	M22-Ap0027899	X		X	
16	SX_OB_20220413_03_56_S_S_Primary_EU_F	Apr 13, 2022	3:56AM	AUS Leachate - pH 5.0	M22-Ap0027900	X		X	
17	SX_OB_20220412_07_45_S_S_Triplicate_EUF	Apr 12, 2022	7:45AM	AUS Leachate - Reagent Water	M22-Ap0027901	X		X	
18	SX_OB_20220412_07_45_S_S_Triplicate_EUF	Apr 12, 2022	7:51AM	AUS Leachate	M22-	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 13, 2022 11:58 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	879810	<b>Due:</b>	Apr 22, 2022
<b>Project Name:</b>	20220413043532-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>									
	412_07_51_S S_Primary_EU F			- Reagent Water	Ap0027902				
19	SX_OB_20220 412_17_17_S S_Primary_EU F	Apr 12, 2022	5:17PM	AUS Leachate - Reagent Water	M22- Ap0027903	X		X	
20	SX_OB_20220 412_17_18_S S_Duplicate_E UF	Apr 12, 2022	5:18PM	AUS Leachate - Reagent Water	M22- Ap0027904	X		X	
21	SX_OB_20220 412_19_56_S S_Primary_EU	Apr 12, 2022	7:56PM	AUS Leachate - Reagent Water	M22- Ap0027905	X		X	

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

**Order No.:**  
**Report #:** 879810  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Apr 13, 2022 11:58 AM  
**Due:** Apr 22, 2022  
**Priority:** 5 Day  
**Contact Name:** Agon Lab Reports (Spoil Project)

**Project Name:** 20220413043532-Eurofin-21  
**Project ID:** JC0927

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<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_20220413_00_04_S_S_Primary_EU_F	Apr 13, 2022	12:04AM	AUS Leachate - Reagent Water	M22-Ap0027906	X		X	
23	SX_OB_20220413_03_56_S_S_Primary_EU_F	Apr 13, 2022	3:56AM	AUS Leachate - Reagent Water	M22-Ap0027907	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	
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)	%	102		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	98		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	97		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	91		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	98		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	88		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	111		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	101		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	129		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	85		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	93		50-150	Pass	
<b>LCS - % Recovery</b>						

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
<b>Perfluoroalkyl sulfonamido substances</b>								
Perfluorooctane sulfonamide (FOSA)	%	100			50-150	Pass		
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	98			50-150	Pass		
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	113			50-150	Pass		
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	100			50-150	Pass		
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	105			50-150	Pass		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	95			50-150	Pass		
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	92			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	83			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	95			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	76			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	96			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	102			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	108			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	127			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	73			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)	%	112			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	145			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)	%	98			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-Ap0025671	NCP	%	106		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ap0025671	NCP	%	111		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ap0025671	NCP	%	104		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ap0025671	NCP	%	105		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ap0025671	NCP	%	109		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ap0025671	NCP	%	104		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ap0025671	NCP	%	131		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0025671	NCP	%	108		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ap0025671	NCP	%	139		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0025671	NCP	%	104		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0025671	NCP	%	101		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>								
Perfluorooctane sulfonamide (FOSA)	M22-Ap0025671	NCP	%	109		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0025671	NCP	%	97		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0025671	NCP	%	81		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0025671	NCP	%	101		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0025671	NCP	%	110		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-Ap0025671	NCP	%	70			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0025671	NCP	%	100			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0025671	NCP	%	97			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ap0025671	NCP	%	111			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0025671	NCP	%	83			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0025671	NCP	%	101			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0025671	NCP	%	113			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0025671	NCP	%	132			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0025671	NCP	%	105			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0025671	NCP	%	92			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-Ap0025671	NCP	%	120			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0025671	NCP	%	124			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0025671	NCP	%	97			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0025671	NCP	%	120			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-Ap0027887	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ap0027887	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0027887	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0027887	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0027887	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0027887	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ap0027887	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0027887	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-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0027887	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-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0027887	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0027887	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0027887	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
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)



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

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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# CHAIN OF CUSTODY RECORD

Eurofins Environment Testing ABN 50 205 045 521

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

Brisbane Laboratory  
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07 3902 4600 EnviroSampleQLD@eurofins.com

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

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

Company	AGON Environmental - Tunnel Spoil Testing	Project No	JC0927	Project Manager	Craig Trimbur	Sampler(s)	Luke_EP Risk/David Lawson/Will O'Haire	
Address	Unit H76, 63-85 Turner St, Port Melbourne VIC 3207	Project Name	WGTP-Tunnel Ref: 20220414042335-Eurofin-8	EDD Format	Esdat	Handed over by		
Contact Name	Craig Trimbur David Lawson	<b>Analyses</b> <small>Where metals are requested, please specify 'Total' or 'Filtered' - SUITE code must be used to attract SUITE pricing</small> <b>Spoil Sample Preparation</b> Suite WGTP-R1-TRI/PAH/Phenols/OCPI/PCB/VOC/Vinyl Chloride/ Metals (As, Cd, Cr, Cu, Ni, Pb, Hg, Ag, Sn, Mo, Se, Zn)/ Cr6+ CN/ Total Fluoride/ pH PFAS Extended Suite - 0.1 - 5ug/kg ASLP PH 5 - PFAS 0.01-0.05 ug/l ASLP Reagent - PFAS 0.01-0.05ug/l						
Phone No	+61 400 826 907 (Craig) +61 490 411 004 (David)							
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.							
Purchase Order								
Quote ID No	Agon WGTP TST							
						<b>Containers</b> <small>Change container type &amp; size if necessary</small>	<b>Required Turnaround Time (TAT)</b> <small>Default will be 5 days if not ticked</small>	
						500mL Plastic 250mL Plastic 125mL Plastic 200mL Amber Glass 40mL VOA vial 500mL PFAS Bottle Jar (Glass or HDPE) Other (Bucket)	<input type="checkbox"/> Overnight (reporting by 9am) <input type="checkbox"/> Same day <input type="checkbox"/> 1 day <input type="checkbox"/> 2 days <input type="checkbox"/> 3 days <input checked="" type="checkbox"/> 5 days (Standard) <input type="checkbox"/> Other ( )	

No	Client Sample ID	Sampled Date/Time	Matrix	S	X	X	X	X											Sample Comments / Dangerous Goods Hazard Warning
1	SX_OB_20220413_08_25_SS_Primary_EUF	13.04.2022_08:25	S	X	X	X	X	X											
2	SX_OB_20220413_12_56_SS_Primary_EUF	13.04.2022_12:56	S	X	X	X	X	X											
3	SX_OB_20220413_12_43_SS_Primary_EUF	13.04.2022_12:43	S	X	X	X	X	X											
4	SX_OB_20220413_16_18_SS_Primary_EUF	13.04.2022_16:18	S	X	X	X	X	X											
5	SX_OB_20220413_08_18_SS_Triplicate_EUF	13.04.2022_08:18	S	X	X	X	X	X											
6	SX_OB_20220413_16_20_SS_Duplicate_EUF	13.04.2022_16:22	S	X	X	X	X	X											
7	SX_OB_20220413_16_49_SR_Rinsate_EUF	13.04.2022_16:49	W			X						1							
8	SX_OB_20220413_16_41_SB_Blank_EUF	13.04.2022_16:41	W			X						1							
9	SX_OB_20220413_20_17_SS_Primary_EUF	13.04.2022_20:17	S	X	X	X	X	X											
10	SX_OB_20220414_00_06_SS_Primary_EUF	14.04.2022_00:06	S	X	X	X	X	X											
11	SX_OB_20220414_04_02_SS_Primary_EUF	14.04.2022_04:02	S	X	X	X	X	X											
Total Counts				9	9	11	9	9				2							

Method of Shipment	<input checked="" type="checkbox"/> Courier (# )	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Postal	Name	Will O'Haire	Signature	WOH	Date	14/04/2022	Time	AM
Laboratory Use Only	Received By	SYD   BNE   MEL   PER   ADL   NTL   DRW	Signature	Date	14/4/22	Time	10:40am	Temperature	17.3	Report No	880173

Eurofins Environment Testing Australia Pty Ltd

Jake

## Eurofins Environment Testing Australia Pty Ltd

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**Christchurch**

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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:** 20220414042335-Eurofin-8  
**Project ID:** JC0927  
**Turnaround time:** 5 Day  
**Date/Time received:** Apr 14, 2022 10:40 AM  
**Eurofins reference:** 880173

## 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.*



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**Address:** 3/224 Glen Osmond Road  
Fullarton  
SA 5063  
  
**Project Name:** 20220414042335-Eurofin-8  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 880173  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Apr 14, 2022 10:40 AM  
**Due:** Apr 26, 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_20220413_08_25_S_S_Primary_EU_F	Apr 13, 2022	8:25AM	Soil	M22-Ap0030616		X	X	X
2	SX_OB_20220413_12_56_S_S_Primary_EU_F	Apr 13, 2022	12:56PM	Soil	M22-Ap0030617		X	X	X
3	SX_OB_20220413_12_43_S_S_Primary_EU_F	Apr 13, 2022	12:43PM	Soil	M22-Ap0030618		X	X	X

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
4	SX_OB_20220413_16_18_S_S_Primary_EU_F	Apr 13, 2022	4:18PM	Soil	M22-Ap0030619		X	X	X
5	SX_OB_20220413_08_18_S_S_Triplicate_EUF	Apr 13, 2022	8:18AM	Soil	M22-Ap0030620		X	X	X
6	SX_OB_20220413_16_20_S_S_Duplicate_EUF	Apr 13, 2022	4:20PM	Soil	M22-Ap0030621		X	X	X
7	SX_OB_20220413_16_49_S	Apr 13, 2022	4:49PM	Water	M22-Ap0030622			X	



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**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>									
	R_Rinsate_EU F								
8	SX_OB_20220 413_16_41_S B_Blank_EUF	Apr 13, 2022	4:41PM	Water	M22- Ap0030623			X	
9	SX_OB_20220 413_20_17_S S_Primary_EU F	Apr 13, 2022	8:17PM	Soil	M22- Ap0030624		X	X	X
10	SX_OB_20220 414_00_06_S S_Primary_EU F	Apr 14, 2022	12:06AM	Soil	M22- Ap0030625		X	X	X
11	SX_OB_20220	Apr 14, 2022	4:02AM	Soil	M22-		X	X	X



# Environment Testing

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**Project Name:** 20220414042335-Eurofin-8  
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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>									
	414_04_02_S S_Primary_EU F				Ap0030626				
12	SX_OB_20220 413_08_25_S S_Primary_EU F	Apr 13, 2022	8:25AM	AUS Leachate - pH 5.0	M22- Ap0030627	X		X	
13	SX_OB_20220 413_12_56_S S_Primary_EU F	Apr 13, 2022	12:56PM	AUS Leachate - pH 5.0	M22- Ap0030628	X		X	
14	SX_OB_20220 413_12_43_S S_Primary_EU	Apr 13, 2022	12:43PM	AUS Leachate - pH 5.0	M22- Ap0030629	X		X	



# Environment Testing

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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_20220413_16_18_S_S_Primary_EU_F	Apr 13, 2022	4:18PM	AUS Leachate - pH 5.0	M22-Ap0030630	X		X	
16	SX_OB_20220413_08_18_S_S_Triplicate_EUF	Apr 13, 2022	8:18AM	AUS Leachate - pH 5.0	M22-Ap0030631	X		X	
17	SX_OB_20220413_16_20_S_S_Duplicate_EUF	Apr 13, 2022	4:20PM	AUS Leachate - pH 5.0	M22-Ap0030632	X		X	
18	SX_OB_20220	Apr 13, 2022	8:17PM	AUS Leachate	M22-	X		X	



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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	413_20_17_S S_Primary_EU F			- pH 5.0	Ap0030633				
19	SX_OB_20220 414_00_06_S S_Primary_EU F	Apr 14, 2022	12:06AM	AUS Leachate - pH 5.0	M22- Ap0030634	X		X	
20	SX_OB_20220 414_04_02_S S_Primary_EU F	Apr 14, 2022	4:02AM	AUS Leachate - pH 5.0	M22- Ap0030635	X		X	
21	SX_OB_20220 413_08_25_S S_Primary_EU	Apr 13, 2022	8:25AM	AUS Leachate - Reagent Water	M22- Ap0030636	X		X	



# 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:** 20220414042335-Eurofin-8  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 880173  
**Phone:** 08 8338 1009  
**Fax:**

**Received:** Apr 14, 2022 10:40 AM  
**Due:** Apr 26, 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_20220413_12_56_S_S_Primary_EU_F	Apr 13, 2022	12:56PM	AUS Leachate - Reagent Water	M22-Ap0030637	X		X	
23	SX_OB_20220413_12_43_S_S_Primary_EU_F	Apr 13, 2022	12:43PM	AUS Leachate - Reagent Water	M22-Ap0030638	X		X	
24	SX_OB_20220413_16_18_S_S_Primary_EU_F	Apr 13, 2022	4:18PM	AUS Leachate - Reagent Water	M22-Ap0030639	X		X	
25	SX_OB_20220	Apr 13, 2022	8:18AM	AUS Leachate	M22-	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 14, 2022 10:40 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	880173	<b>Due:</b>	Apr 26, 2022
<b>Project Name:</b>	20220414042335-Eurofin-8	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	413_08_18_S S_Triplicate_E UF			- Reagent Water	Ap0030640				
26	SX_OB_20220 413_16_20_S S_Duplicate_E UF	Apr 13, 2022	4:20PM	AUS Leachate - Reagent Water	M22- Ap0030641	X		X	
27	SX_OB_20220 413_20_17_S S_Primary_EU F	Apr 13, 2022	8:17PM	AUS Leachate - Reagent Water	M22- Ap0030642	X		X	
28	SX_OB_20220 414_00_06_S S_Primary_EU	Apr 14, 2022	12:06AM	AUS Leachate - Reagent Water	M22- Ap0030643	X		X	



# Environment Testing

## Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

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

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

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

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

## Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

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

## Eurofins Environment Testing NZ Limited

NZBN: 9429046024954

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

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

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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:** 20220414042335-Eurofin-8  
**Project ID:** JC0927

**Order No.:**  
**Report #:** 880173  
**Phone:** 08 8338 1009  
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**Received:** Apr 14, 2022 10:40 AM  
**Due:** Apr 26, 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								
29	SX_OB_20220414_04_02_S_S_Primary_EU F	Apr 14, 2022	4:02AM	AUS Leachate - Reagent Water	M22-Ap0030644	X		X	
<b>Test Counts</b>						18	9	29	9

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



NATA Accredited  
Accreditation Number 1261  
Site Number 1254

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

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

Report **880173-L**  
Project name **20220414042335-Eurofin-8**  
Project ID **JC0927**  
Received Date **Apr 14, 2022**

Client Sample ID			SX_OB_20220 413_08_25_SS _Primary_EUF	SX_OB_20220 413_12_56_SS _Primary_EUF	SX_OB_20220 413_12_43_SS _Primary_EUF	SX_OB_20220 413_16_18_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- Ap0030627	M22- Ap0030628	M22- Ap0030629	M22- Ap0030630
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 13, 2022
Test/Reference	LOR	Unit				
<b>AUS Leaching Procedure</b>						
Leachate Fluid <sup>C01</sup>		comment	1.0	1.0	1.0	1.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	5.0	5.0	5.0	5.0
pH (off)	0.1	pH Units	5.4	5.4	5.4	5.3
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	76	78	75	72
13C5-PFPeA (surr.)	1	%	82	87	81	92
13C5-PFHxA (surr.)	1	%	75	82	80	73
13C4-PFHpA (surr.)	1	%	79	80	76	71
13C8-PFOA (surr.)	1	%	78	79	82	75
13C5-PFNA (surr.)	1	%	77	84	77	68
13C6-PFDA (surr.)	1	%	61	59	62	47
13C2-PFUnDA (surr.)	1	%	61	52	46	44
13C2-PFDoDA (surr.)	1	%	41	36	36	31
13C2-PFTeDA (surr.)	1	%	12	11	12	14
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			SX_OB_20220 413_08_25_SS _Primary_EUF	SX_OB_20220 413_12_56_SS _Primary_EUF	SX_OB_20220 413_12_43_SS _Primary_EUF	SX_OB_20220 413_16_18_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- Ap0030627	M22- Ap0030628	M22- Ap0030629	M22- Ap0030630
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 13, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonamido substances</b>						
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	54	52	55	44
D3-N-MeFOSA (surr.)	1	%	37	28	32	47
D5-N-EtFOSA (surr.)	1	%	60	36	43	58
D7-N-MeFOSE (surr.)	1	%	58	47	55	38
D9-N-EtFOSE (surr.)	1	%	65	49	67	41
D5-N-EtFOSAA (surr.)	1	%	18	22	14	19
D3-N-MeFOSAA (surr.)	1	%	21	28	20	19
<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	%	82	87	85	84
18O2-PFHxS (surr.)	1	%	80	88	76	73
13C8-PFOS (surr.)	1	%	74	77	73	68
<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	%	48	48	49	44
13C2-6:2 FTSA (surr.)	1	%	50	53	47	46
13C2-8:2 FTSA (surr.)	1	%	99	92	88	76
13C2-10:2 FTSA (surr.)	1	%	43	38	43	30
<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 413_08_18_SS _TriPLICATE_EU F	SX_OB_20220 413_16_20_SS _Duplicate_EU F	SX_OB_20220 413_20_17_SS _Primary_EUF	SX_OB_20220 414_00_06_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- Ap0030631	M22- Ap0030632	M22- Ap0030633	M22- Ap0030634
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 14, 2022
Test/Reference	LOR	Unit				
<b>AUS Leaching Procedure</b>						
Leachate Fluid <sup>C01</sup>		comment	1.0	1.0	1.0	1.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	5.0	5.0	5.0	5.0
pH (off)	0.1	pH Units	5.3	5.3	5.3	5.4
<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 (PFTTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	75	83	78	79
13C5-PFPeA (surr.)	1	%	90	83	83	89
13C5-PFHxA (surr.)	1	%	79	84	77	79
13C4-PFHpA (surr.)	1	%	81	84	75	81
13C8-PFOA (surr.)	1	%	88	93	82	84
13C5-PFNA (surr.)	1	%	81	95	73	77
13C6-PFDA (surr.)	1	%	66	84	59	51
13C2-PFUnDA (surr.)	1	%	57	84	53	36
13C2-PFDoDA (surr.)	1	%	45	73	46	29
13C2-PFTTeDA (surr.)	1	%	12	23	22	10
<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	%	55	91	67	55
D3-N-MeFOSA (surr.)	1	%	35	106	78	29
D5-N-EtFOSA (surr.)	1	%	49	141	105	44
D7-N-MeFOSE (surr.)	1	%	43	97	57	51
D9-N-EtFOSE (surr.)	1	%	56	99	64	60
D5-N-EtFOSAA (surr.)	1	%	25	34	22	13
D3-N-MeFOSAA (surr.)	1	%	27	34	27	17

Client Sample ID			SX_OB_20220 413_08_18_SS _TriPLICATE_EU F	SX_OB_20220 413_16_20_SS _Duplicate_EU F	SX_OB_20220 413_20_17_SS _Primary_EUF	SX_OB_20220 414_00_06_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- Ap0030631	M22- Ap0030632	M22- Ap0030633	M22- Ap0030634
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 14, 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	%	85	86	78	87
18O2-PFHxS (surr.)	1	%	83	92	78	80
13C8-PFOS (surr.)	1	%	87	101	74	79
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	44	47	74	66
13C2-6:2 FTSA (surr.)	1	%	50	58	51	54
13C2-8:2 FTSA (surr.)	1	%	88	110	81	88
13C2-10:2 FTSA (surr.)	1	%	48	86	49	34
<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 414_04_02_SS _Primary_EUF	SX_OB_20220 413_08_25_SS _Primary_EUF	SX_OB_20220 413_12_56_SS _Primary_EUF	SX_OB_20220 413_12_43_SS _Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0030635	M22- Ap0030636	M22- Ap0030637	M22- Ap0030638
Date Sampled			Apr 14, 2022	Apr 13, 2022	Apr 13, 2022	Apr 13, 2022
Test/Reference	LOR	Unit				
<b>AUS Leaching Procedure</b>						
Leachate Fluid <sup>C01</sup>		comment	1.0	4.0	4.0	4.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	5.0	6.4	6.4	6.4
pH (off)	0.1	pH Units	5.2	7.6	8.4	8.5



Client Sample ID			SX_OB_20220 414_04_02_SS _Primary_EUF	SX_OB_20220 413_08_25_SS _Primary_EUF	SX_OB_20220 413_12_56_SS _Primary_EUF	SX_OB_20220 413_12_43_SS _Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0030635	M22- Ap0030636	M22- Ap0030637	M22- Ap0030638
Date Sampled			Apr 14, 2022	Apr 13, 2022	Apr 13, 2022	Apr 13, 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 (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	%	76	77	82	77
13C5-PFPeA (surr.)	1	%	84	81	89	82
13C5-PFHxA (surr.)	1	%	78	71	77	73
13C4-PFHpA (surr.)	1	%	80	77	85	74
13C8-PFOA (surr.)	1	%	83	76	86	74
13C5-PFNA (surr.)	1	%	79	82	92	75
13C6-PFDA (surr.)	1	%	58	61	76	59
13C2-PFUnDA (surr.)	1	%	54	60	72	51
13C2-PFDoDA (surr.)	1	%	42	49	59	34
13C2-PFTTeDA (surr.)	1	%	15	14	15	26
<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	%	62	68	79	65
D3-N-MeFOSA (surr.)	1	%	51	54	55	39
D5-N-EtFOSA (surr.)	1	%	64	66	71	49
D7-N-MeFOSE (surr.)	1	%	58	42	51	38
D9-N-EtFOSE (surr.)	1	%	63	48	60	40
D5-N-EtFOSAA (surr.)	1	%	25	34	33	31
D3-N-MeFOSAA (surr.)	1	%	26	33	45	33
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			SX_OB_20220 414_04_02_SS _Primary_EUF	SX_OB_20220 413_08_25_SS _Primary_EUF	SX_OB_20220 413_12_56_SS _Primary_EUF	SX_OB_20220 413_12_43_SS _Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0030635	M22- Ap0030636	M22- Ap0030637	M22- Ap0030638
Date Sampled			Apr 14, 2022	Apr 13, 2022	Apr 13, 2022	Apr 13, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	82	76	84	77
18O2-PFHxS (surr.)	1	%	83	73	82	77
13C8-PFOS (surr.)	1	%	81	80	87	73
<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	%	48	52	48	47
13C2-6:2 FTSA (surr.)	1	%	49	48	57	52
13C2-8:2 FTSA (surr.)	1	%	87	122	144	109
13C2-10:2 FTSA (surr.)	1	%	44	48	49	23
<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 413_16_18_SS _Primary_EUF	SX_OB_20220 413_08_18_SS _Triplicate_EU F	SX_OB_20220 413_16_20_SS _Duplicate_EU F	SX_OB_20220 413_20_17_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- Ap0030639	M22- Ap0030640	M22- Ap0030641	M22- Ap0030642
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 13, 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	8.7	8.6	8.7	8.8
<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

Client Sample ID			SX_OB_20220 413_16_18_SS _Primary_EUF	SX_OB_20220 413_08_18_SS _Triplicate_EU F	SX_OB_20220 413_16_20_SS _Duplicate_EU F	SX_OB_20220 413_20_17_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- Ap0030639	M22- Ap0030640	M22- Ap0030641	M22- Ap0030642
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 13, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
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	%	77	80	81	82
13C5-PFPeA (surr.)	1	%	86	89	99	88
13C5-PFHxA (surr.)	1	%	74	75	77	77
13C4-PFHpA (surr.)	1	%	79	74	80	80
13C8-PFOA (surr.)	1	%	81	80	84	79
13C5-PFNA (surr.)	1	%	81	77	86	83
13C6-PFDA (surr.)	1	%	66	60	69	72
13C2-PFUnDA (surr.)	1	%	67	55	66	64
13C2-PFDoDA (surr.)	1	%	52	43	48	53
13C2-PFTeDA (surr.)	1	%	17	13	11	16
<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	%	67	66	76	77
D3-N-MeFOSA (surr.)	1	%	42	39	69	51
D5-N-EtFOSA (surr.)	1	%	48	53	81	64
D7-N-MeFOSE (surr.)	1	%	42	36	48	55
D9-N-EtFOSE (surr.)	1	%	55	41	57	67
D5-N-EtFOSAA (surr.)	1	%	37	28	37	30
D3-N-MeFOSAA (surr.)	1	%	40	32	41	35
<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	%	80	81	82	82
18O2-PFHxS (surr.)	1	%	83	79	79	81
13C8-PFOS (surr.)	1	%	77	83	83	78

<b>Client Sample ID</b>			<b>SX_OB_20220 413_16_18_SS _Primary_EUF</b>	<b>SX_OB_20220 413_08_18_SS _TriPLICATE_EU F</b>	<b>SX_OB_20220 413_16_20_SS _Duplicate_EU F</b>	<b>SX_OB_20220 413_20_17_SS _Primary_EUF</b>
<b>Sample Matrix</b>			<b>AUS Leachate - Reagent Water</b>	<b>AUS Leachate - Reagent Water</b>	<b>AUS Leachate - Reagent Water</b>	<b>AUS Leachate - Reagent Water</b>
<b>Eurofins Sample No.</b>			<b>M22- Ap0030639</b>	<b>M22- Ap0030640</b>	<b>M22- Ap0030641</b>	<b>M22- Ap0030642</b>
<b>Date Sampled</b>			<b>Apr 13, 2022</b>	<b>Apr 13, 2022</b>	<b>Apr 13, 2022</b>	<b>Apr 13, 2022</b>
Test/Reference	LOR	Unit				
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	49	46	51	87
13C2-6:2 FTSA (surr.)	1	%	52	56	51	53
13C2-8:2 FTSA (surr.)	1	%	116	113	127	119
13C2-10:2 FTSA (surr.)	1	%	59	45	48	51
<b>PFASs Summations</b>						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

<b>Client Sample ID</b>			<b>SX_OB_20220 414_00_06_SS _Primary_EUF</b>	<b>SX_OB_20220 414_04_02_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- Ap0030643</b>	<b>M22- Ap0030644</b>
<b>Date Sampled</b>			<b>Apr 14, 2022</b>	<b>Apr 14, 2022</b>
Test/Reference	LOR	Unit		
<b>AUS Leaching Procedure</b>				
Leachate Fluid <sup>C01</sup>		comment	4.0	4.0
pH (initial)	0.1	pH Units	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	6.4	6.4
pH (off)	0.1	pH Units	8.7	8.6
<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 (PFTTeDA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	80	79

Client Sample ID			SX_OB_20220 414_00_06_SS _Primary_EUF	SX_OB_20220 414_04_02_SS _Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- Ap0030643	M22- Ap0030644
Date Sampled			Apr 14, 2022	Apr 14, 2022
Test/Reference	LOR	Unit		
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				
13C5-PFPeA (surr.)	1	%	84	88
13C5-PFHxA (surr.)	1	%	77	74
13C4-PFHpA (surr.)	1	%	80	78
13C8-PFOA (surr.)	1	%	76	78
13C5-PFNA (surr.)	1	%	83	81
13C6-PFDA (surr.)	1	%	71	74
13C2-PFUnDA (surr.)	1	%	60	61
13C2-PFDoDA (surr.)	1	%	53	59
13C2-PFTeDA (surr.)	1	%	15	16
<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	%	73	79
D3-N-MeFOSA (surr.)	1	%	27	84
D5-N-EtFOSA (surr.)	1	%	33	83
D7-N-MeFOSE (surr.)	1	%	51	65
D9-N-EtFOSE (surr.)	1	%	59	66
D5-N-EtFOSAA (surr.)	1	%	40	38
D3-N-MeFOSAA (surr.)	1	%	45	47
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>				
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	0.01	ug/L	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	85	83
18O2-PFHxS (surr.)	1	%	82	80
13C8-PFOS (surr.)	1	%	77	84

<b>Client Sample ID</b>			<b>SX_OB_20220 414_00_06_SS _Primary_EUF</b>	<b>SX_OB_20220 414_04_02_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- Ap0030643</b>	<b>M22- Ap0030644</b>
<b>Date Sampled</b>			<b>Apr 14, 2022</b>	<b>Apr 14, 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	%	73	47
13C2-6:2 FTSA (surr.)	1	%	65	57
13C2-8:2 FTSA (surr.)	1	%	76	134
13C2-10:2 FTSA (surr.)	1	%	55	48
<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 19, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Apr 19, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Apr 19, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 19, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 19, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 19, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 19, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 14, 2022	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 14, 2022 10:40 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	880173	<b>Due:</b>	Apr 26, 2022
<b>Project Name:</b>	20220414042335-Eurofin-8	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	Agon Lab Reports (Spoil Project)

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_OB_20220413_08_25_S_S_Primary_EU_F	Apr 13, 2022	8:25AM	Soil	M22-Ap0030616		X	X	X
2	SX_OB_20220413_12_56_S_S_Primary_EU_F	Apr 13, 2022	12:56PM	Soil	M22-Ap0030617		X	X	X
3	SX_OB_20220413_12_43_S_S_Primary_EU_F	Apr 13, 2022	12:43PM	Soil	M22-Ap0030618		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_20220413_16_18_S_S_Primary_EU_F	Apr 13, 2022	4:18PM	Soil	M22-Ap0030619		X	X	X
5	SX_OB_20220413_08_18_S_S_Triplicate_EUF	Apr 13, 2022	8:18AM	Soil	M22-Ap0030620		X	X	X
6	SX_OB_20220413_16_20_S_S_Duplicate_EUF	Apr 13, 2022	4:20PM	Soil	M22-Ap0030621		X	X	X
7	SX_OB_20220413_16_49_S	Apr 13, 2022	4:49PM	Water	M22-Ap0030622			X	

**Company Name:** Agon Environmental Pty Ltd - VIC  
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**Order No.:**  
**Report #:** 880173  
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**Fax:**

**Received:** Apr 14, 2022 10:40 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>									
	R_Rinsate_EU F								
8	SX_OB_20220 413_16_41_S B_Blank_EUF	Apr 13, 2022	4:41PM	Water	M22- Ap0030623		X		
9	SX_OB_20220 413_20_17_S S_Primary_EU F	Apr 13, 2022	8:17PM	Soil	M22- Ap0030624		X	X	X
10	SX_OB_20220 414_00_06_S S_Primary_EU F	Apr 14, 2022	12:06AM	Soil	M22- Ap0030625		X	X	X
11	SX_OB_20220	Apr 14, 2022	4:02AM	Soil	M22-		X	X	X

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<b>Project Name:</b>	20220414042335-Eurofin-8	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	414_04_02_S S_Primary_EU F				Ap0030626				
12	SX_OB_20220 413_08_25_S S_Primary_EU F	Apr 13, 2022	8:25AM	AUS Leachate - pH 5.0	M22- Ap0030627	X		X	
13	SX_OB_20220 413_12_56_S S_Primary_EU F	Apr 13, 2022	12:56PM	AUS Leachate - pH 5.0	M22- Ap0030628	X		X	
14	SX_OB_20220 413_12_43_S S_Primary_EU	Apr 13, 2022	12:43PM	AUS Leachate - pH 5.0	M22- Ap0030629	X		X	

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<b>Project Name:</b>	20220414042335-Eurofin-8	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	F								
15	SX_OB_20220413_16_18_S_S_Primary_EU_F	Apr 13, 2022	4:18PM	AUS Leachate - pH 5.0	M22-Ap0030630	X		X	
16	SX_OB_20220413_08_18_S_S_Triplicate_EUF	Apr 13, 2022	8:18AM	AUS Leachate - pH 5.0	M22-Ap0030631	X		X	
17	SX_OB_20220413_16_20_S_S_Duplicate_EUF	Apr 13, 2022	4:20PM	AUS Leachate - pH 5.0	M22-Ap0030632	X		X	
18	SX_OB_20220	Apr 13, 2022	8:17PM	AUS Leachate	M22-	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	413_20_17_S S_Primary_EU F			- pH 5.0	Ap0030633				
19	SX_OB_20220 414_00_06_S S_Primary_EU F	Apr 14, 2022	12:06AM	AUS Leachate - pH 5.0	M22- Ap0030634	X		X	
20	SX_OB_20220 414_04_02_S S_Primary_EU F	Apr 14, 2022	4:02AM	AUS Leachate - pH 5.0	M22- Ap0030635	X		X	
21	SX_OB_20220 413_08_25_S S_Primary_EU	Apr 13, 2022	8:25AM	AUS Leachate - Reagent Water	M22- Ap0030636	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_20220413_12_56_S_S_Primary_EU_F	Apr 13, 2022	12:56PM	AUS Leachate - Reagent Water	M22-Ap0030637	X		X	
23	SX_OB_20220413_12_43_S_S_Primary_EU_F	Apr 13, 2022	12:43PM	AUS Leachate - Reagent Water	M22-Ap0030638	X		X	
24	SX_OB_20220413_16_18_S_S_Primary_EU_F	Apr 13, 2022	4:18PM	AUS Leachate - Reagent Water	M22-Ap0030639	X		X	
25	SX_OB_20220	Apr 13, 2022	8:18AM	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>									
	413_08_18_S S_Triplicate_E UF			- Reagent Water	Ap0030640				
26	SX_OB_20220 413_16_20_S S_Duplicate_E UF	Apr 13, 2022	4:20PM	AUS Leachate - Reagent Water	M22- Ap0030641	X		X	
27	SX_OB_20220 413_20_17_S S_Primary_EU F	Apr 13, 2022	8:17PM	AUS Leachate - Reagent Water	M22- Ap0030642	X		X	
28	SX_OB_20220 414_00_06_S S_Primary_EU	Apr 14, 2022	12:06AM	AUS Leachate - Reagent Water	M22- Ap0030643	X		X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 14, 2022 10:40 AM
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<b>Project Name:</b>	20220414042335-Eurofin-8	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	F								
29	SX_OB_20220414_04_02_S_S_Primary_EU_F	Apr 14, 2022	4:02AM	AUS Leachate - Reagent Water	M22-Ap0030644	X		X	
<b>Test Counts</b>						18	9	29	9



## Internal Quality Control Review and Glossary

### General

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

### Holding Times

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

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

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

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

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

### Units

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

### Terms

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

### QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

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

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

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

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

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

### QC Data General Comments

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

**Quality Control Results**

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05		0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01		0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01		0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01		0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01		0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01		0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01		0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01		0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01		0.01	Pass	
Perfluorotridecanoic acid (PFTTrDA)	ug/L	< 0.01		0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01		0.01	Pass	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05		0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05		0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05		0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	< 0.05		0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05		0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05		0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05		0.05	Pass	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01		0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01		0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01		0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01		0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01		0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01		0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01		0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01		0.01	Pass	
<b>Method Blank</b>						
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01		0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05		0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01		0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01		0.01	Pass	
<b>LCS - % Recovery</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA)	%	87		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	118		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	97		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	91		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	86		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	87		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	91		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	99		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	93		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	77		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	105		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)	%	119			50-150	Pass			
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	134			50-150	Pass			
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	144			50-150	Pass			
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	120			50-150	Pass			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	112			50-150	Pass			
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	86			50-150	Pass			
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	104			50-150	Pass			
<b>LCS - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>									
Perfluorobutanesulfonic acid (PFBS)	%	92			50-150	Pass			
Perfluorononanesulfonic acid (PFNS)	%	76			50-150	Pass			
Perfluoropropanesulfonic acid (PFPrS)	%	87			50-150	Pass			
Perfluoropentanesulfonic acid (PFPeS)	%	80			50-150	Pass			
Perfluorohexanesulfonic acid (PFHxS)	%	85			50-150	Pass			
Perfluoroheptanesulfonic acid (PFHpS)	%	104			50-150	Pass			
Perfluorooctanesulfonic acid (PFOS)	%	103			50-150	Pass			
Perfluorodecanesulfonic acid (PFDS)	%	114			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)	%	96			50-150	Pass			
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	99			50-150	Pass			
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	101			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>Duplicate</b>									
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>									
				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M22-Ap0030627	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0030627	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-Ap0030627	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0030627	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0030627	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0030627	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0030627	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-Ap0030627	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0030627	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
<b>Duplicate</b>								
<b>Perfluoroalkyl sulfonic acids (PFSAs)</b>				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
<b>Duplicate</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0030627	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0030627	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
<b>Duplicate</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Ap0030641	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ap0030641	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0030641	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0030641	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0030641	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0030641	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ap0030641	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0030641	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0030641	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0030641	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0030641	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
Emily Rosenberg	Senior Analyst (NSW)
Joseph Edouard	Senior Analyst (VIC)
Richard Corner	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 **880173-S**  
Project name **20220414042335-Eurofin-8**  
Project ID **JC0927**  
Received Date **Apr 14, 2022**

Client Sample ID			SX_OB_20220 413_08_25_SS _Primary_EUF	SX_OB_20220 413_12_56_SS _Primary_EUF	SX_OB_20220 413_12_43_SS _Primary_EUF	SX_OB_20220 413_16_18_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0030616	M22- Ap0030617	M22- Ap0030618	M22- Ap0030619
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 13, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
<b>Volatile Organics</b>						
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
<b>Volatile Organics</b>						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0030616	M22- Ap0030617	M22- Ap0030618	M22- Ap0030619
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 13, 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	%	58	58	73	70
Toluene-d8 (surr.)	1	%	67	61	74	74
<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



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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0030616	M22- Ap0030617	M22- Ap0030618	M22- Ap0030619
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 13, 2022
Test/Reference	LOR	Unit				
<b>Polycyclic Aromatic Hydrocarbons</b>						
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	%	55	54	55	53
p-Terphenyl-d14 (surr.)	1	%	69	72	70	71
<b>Organochlorine Pesticides</b>						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	80	85	77	83
Tetrachloro-m-xylene (surr.)	1	%	118	115	107	116

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0030616	M22- Ap0030617	M22- Ap0030618	M22- Ap0030619
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 13, 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	%	80	85	77	83
Tetrachloro-m-xylene (surr.)	1	%	118	115	107	116
<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	%	50	43	52	49
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
<b>Chromium (hexavalent)</b>						
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	1.6
<b>Cyanide (total)</b>						
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
<b>Fluoride (Total)</b>						
Fluoride (Total)	100	mg/kg	< 100	< 100	< 100	290
<b>pH (1:5 Aqueous extract at 25°C as rec.)</b>						
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.3	8.4	8.3	8.5
<b>% Moisture</b>						
% Moisture	1	%	27	31	33	29
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	36	69	47	58
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	100	160	150	140
Copper	5	mg/kg	59	69	100	72
Lead	5	mg/kg	< 5	< 5	5.4	5.9
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0030616	M22- Ap0030617	M22- Ap0030618	M22- Ap0030619
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 13, 2022
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	190	220	320	220
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	100	130	200	130
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTTrDA) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTTeDA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	100	100	96	97
13C5-PFPeA (surr.)	1	%	90	88	95	93
13C5-PFHxA (surr.)	1	%	92	92	87	87
13C4-PFHpA (surr.)	1	%	89	92	90	86
13C8-PFOA (surr.)	1	%	92	85	92	76
13C5-PFNA (surr.)	1	%	63	75	84	79
13C6-PFDA (surr.)	1	%	85	67	63	65
13C2-PFUnDA (surr.)	1	%	96	108	87	107
13C2-PFDoDA (surr.)	1	%	75	73	76	67
13C2-PFTTeDA (surr.)	1	%	84	78	77	76
<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	%	105	101	100	97
D3-N-MeFOSA (surr.)	1	%	82	96	88	92
D5-N-EtFOSA (surr.)	1	%	98	96	96	99
D7-N-MeFOSE (surr.)	1	%	76	78	67	89
D9-N-EtFOSE (surr.)	1	%	89	92	91	81
D5-N-EtFOSAA (surr.)	1	%	123	80	84	100
D3-N-MeFOSAA (surr.)	1	%	59	52	41	58

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0030616	M22- Ap0030617	M22- Ap0030618	M22- Ap0030619
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 13, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>						
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	81	85	81	78
18O2-PFHxS (surr.)	1	%	66	78	77	71
13C8-PFOS (surr.)	1	%	67	74	71	59
<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	%	63	60	56	59
13C2-6:2 FTSA (surr.)	1	%	52	66	53	66
13C2-8:2 FTSA (surr.)	1	%	112	139	116	126
13C2-10:2 FTSA (surr.)	1	%	96	104	90	76
<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

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0030620	M22- Ap0030621	M22- Ap0030624	M22- Ap0030625
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 14, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0030620	M22- Ap0030621	M22- Ap0030624	M22- Ap0030625
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 14, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
<b>Volatile Organics</b>						
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
<b>Volatile Organics</b>						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0030620	M22- Ap0030621	M22- Ap0030624	M22- Ap0030625
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 14, 2022
Test/Reference	LOR	Unit				
<b>Volatile Organics</b>						
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	68	74	52	69
Toluene-d8 (surr.)	1	%	73	77	59	76
<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	55	53	55
p-Terphenyl-d14 (surr.)	1	%	78	67	71	68

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0030620	M22- Ap0030621	M22- Ap0030624	M22- Ap0030625
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 14, 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	%	79	69	70	71
Tetrachloro-m-xylene (surr.)	1	%	129	98	103	116
<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	%	79	69	70	71
Tetrachloro-m-xylene (surr.)	1	%	129	98	103	116
<b>Phenols (Halogenated)</b>						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0030620	M22- Ap0030621	M22- Ap0030624	M22- Ap0030625
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 14, 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	%	54	51	50	48
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
<b>Chromium (hexavalent)</b>						
Chromium (hexavalent)	1	mg/kg	< 1	< 1	1.2	< 1
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
Fluoride (Total)	100	mg/kg	< 100	290	< 100	< 100
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	7.5	8.3	8.1	8.6
% Moisture	1	%	31	29	28	29
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	55	65	36	58
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	140	110	98	120
Copper	5	mg/kg	77	55	50	65
Lead	5	mg/kg	5.2	5.3	< 5	5.9
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	240	160	160	190
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	150	87	91	110
<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	%	98	99	100	100
13C5-PFPeA (surr.)	1	%	99	94	98	105
13C5-PFHxA (surr.)	1	%	88	91	93	90



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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Ap0030620	M22- Ap0030621	M22- Ap0030624	M22- Ap0030625
Date Sampled			Apr 13, 2022	Apr 13, 2022	Apr 13, 2022	Apr 14, 2022
Test/Reference	LOR	Unit				
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
13C4-PFHpA (surr.)	1	%	84	90	90	88
13C8-PFOA (surr.)	1	%	83	92	91	87
13C5-PFNA (surr.)	1	%	82	82	75	76
13C6-PFDA (surr.)	1	%	70	82	79	75
13C2-PFUnDA (surr.)	1	%	116	94	84	94
13C2-PFDoDA (surr.)	1	%	72	72	63	76
13C2-PFTeDA (surr.)	1	%	82	87	75	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	%	99	109	104	104
D3-N-MeFOSA (surr.)	1	%	102	87	79	85
D5-N-EtFOSA (surr.)	1	%	98	100	99	107
D7-N-MeFOSE (surr.)	1	%	73	77	85	81
D9-N-EtFOSE (surr.)	1	%	84	91	102	85
D5-N-EtFOSAA (surr.)	1	%	101	67	102	109
D3-N-MeFOSAA (surr.)	1	%	66	62	57	62
<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	%	79	79	83	86
18O2-PFHxS (surr.)	1	%	71	73	81	76
13C8-PFOS (surr.)	1	%	72	74	80	93
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	60	62	63	60
13C2-6:2 FTSA (surr.)	1	%	55	52	55	61

<b>Client Sample ID</b>			<b>SX_OB_20220 413_08_18_SS _TriPLICATE_EU F</b>	<b>SX_OB_20220 413_16_20_SS _Duplicate_EU F</b>	<b>SX_OB_20220 413_20_17_SS _Primary_EUF</b>	<b>SX_OB_20220 414_00_06_SS _Primary_EUF</b>
<b>Sample Matrix</b>			<b>Soil</b>	<b>Soil</b>	<b>Soil</b>	<b>Soil</b>
<b>Eurofins Sample No.</b>			<b>M22- Ap0030620</b>	<b>M22- Ap0030621</b>	<b>M22- Ap0030624</b>	<b>M22- Ap0030625</b>
<b>Date Sampled</b>			<b>Apr 13, 2022</b>	<b>Apr 13, 2022</b>	<b>Apr 13, 2022</b>	<b>Apr 14, 2022</b>
Test/Reference	LOR	Unit				
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>						
13C2-8:2 FTSA (surr.)	1	%	126	131	130	126
13C2-10:2 FTSA (surr.)	1	%	76	86	75	99
<b>PFASs Summations</b>						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

<b>Client Sample ID</b>			<b>SX_OB_20220 414_04_02_SS _Primary_EUF</b>
<b>Sample Matrix</b>			<b>Soil</b>
<b>Eurofins Sample No.</b>			<b>M22- Ap0030626</b>
<b>Date Sampled</b>			<b>Apr 14, 2022</b>
Test/Reference	LOR	Unit	
<b>Total Recoverable Hydrocarbons</b>			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100
<b>Volatile Organics</b>			
Hexachlorobutadiene	0.5	mg/kg	< 0.5
<b>Volatile Organics</b>			
1.1-Dichloroethane	0.5	mg/kg	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5

<b>Client Sample ID</b>			<b>SX_OB_20220</b>
<b>Sample Matrix</b>			<b>414_04_02_SS</b>
<b>Eurofins Sample No.</b>			<b>_Primary_EUF</b>
<b>Date Sampled</b>			<b>Soil</b>
<b>Test/Reference</b>	LOR	Unit	<b>M22- Ap0030626</b>
			<b>Apr 14, 2022</b>
<b>Volatile Organics</b>			
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5
Benzene	0.1	mg/kg	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5
Bromoform	0.5	mg/kg	< 0.5
Bromomethane	0.5	mg/kg	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5
Chloroethane	0.5	mg/kg	< 0.5
Chloroform	0.5	mg/kg	< 0.5
Chloromethane	0.5	mg/kg	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1
Iodomethane	0.5	mg/kg	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5
o-Xylene	0.1	mg/kg	< 0.1
Styrene	0.5	mg/kg	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5
Toluene	0.1	mg/kg	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3
Total MAH*	0.5	mg/kg	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5
4-Bromofluorobenzene (surr.)	1	%	68
Toluene-d8 (surr.)	1	%	69

<b>Client Sample ID</b>			<b>SX_OB_20220 414_04_02_SS _Primary_EUF</b>
<b>Sample Matrix</b>			<b>Soil</b>
<b>Eurofins Sample No.</b>			<b>M22- Ap0030626</b>
<b>Date Sampled</b>			<b>Apr 14, 2022</b>
Test/Reference	LOR	Unit	
<b>Polycyclic Aromatic Hydrocarbons</b>			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	56
p-Terphenyl-d14 (surr.)	1	%	67
<b>Organochlorine Pesticides</b>			
Chlordanes - Total	0.1	mg/kg	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05
a-HCH	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-HCH	0.05	mg/kg	< 0.05
d-HCH	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxaphene	0.5	mg/kg	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1

<b>Client Sample ID</b>			<b>SX_OB_20220</b>
<b>Sample Matrix</b>			<b>414_04_02_SS</b>
<b>Eurofins Sample No.</b>			<b>_Primary_EUF</b>
<b>Date Sampled</b>			<b>Soil</b>
<b>Test/Reference</b>	LOR	Unit	<b>M22- Ap0030626</b>
			<b>Apr 14, 2022</b>
<b>Organochlorine Pesticides</b>			
Dibutylchlorendate (surr.)	1	%	72
Tetrachloro-m-xylene (surr.)	1	%	110
<b>Polychlorinated Biphenyls</b>			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1
Total PCB*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	72
Tetrachloro-m-xylene (surr.)	1	%	110
<b>Phenols (Halogenated)</b>			
2-Chlorophenol	0.5	mg/kg	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1
Pentachlorophenol	1	mg/kg	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10
Total Halogenated Phenol*	1	mg/kg	< 1
<b>Phenols (non-Halogenated)</b>			
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5
2-Nitrophenol	1.0	mg/kg	< 1
2,4-Dimethylphenol	0.5	mg/kg	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4
Total cresols*	0.5	mg/kg	< 0.5
4-Nitrophenol	5	mg/kg	< 5
Dinoseb	20	mg/kg	< 20
Phenol	0.5	mg/kg	< 0.5
Phenol-d6 (surr.)	1	%	51
Total Non-Halogenated Phenol*	20	mg/kg	< 20
<b>Chromium (hexavalent)</b>			
Chromium (hexavalent)	1	mg/kg	< 1
Cyanide (total)	5	mg/kg	< 5
Fluoride (Total)	100	mg/kg	< 100
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.6
% Moisture	1	%	36

<b>Client Sample ID</b>			<b>SX_OB_20220 414_04_02_SS _Primary_EUF</b>
<b>Sample Matrix</b>			<b>Soil</b>
<b>Eurofins Sample No.</b>			<b>M22- Ap0030626</b>
<b>Date Sampled</b>			<b>Apr 14, 2022</b>
Test/Reference	LOR	Unit	
<b>Heavy Metals</b>			
Arsenic	2	mg/kg	33
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	140
Copper	5	mg/kg	60
Lead	5	mg/kg	< 5
Mercury	0.1	mg/kg	< 0.1
Molybdenum	5	mg/kg	< 5
Nickel	5	mg/kg	190
Selenium	2	mg/kg	< 2
Silver	2	mg/kg	< 2
Tin	10	mg/kg	< 10
Zinc	5	mg/kg	110
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>			
Perfluorobutanoic acid (PFBA) <sup>N11</sup>	5	ug/kg	< 5
Perfluoropentanoic acid (PFPeA) <sup>N11</sup>	5	ug/kg	< 5
Perfluorohexanoic acid (PFHxA) <sup>N11</sup>	5	ug/kg	< 5
Perfluoroheptanoic acid (PFHpA) <sup>N11</sup>	5	ug/kg	< 5
Perfluorooctanoic acid (PFOA) <sup>N11</sup>	5	ug/kg	< 5
Perfluorononanoic acid (PFNA) <sup>N11</sup>	5	ug/kg	< 5
Perfluorodecanoic acid (PFDA) <sup>N11</sup>	5	ug/kg	< 5
Perfluoroundecanoic acid (PFUnDA) <sup>N11</sup>	5	ug/kg	< 5
Perfluorododecanoic acid (PFDoDA) <sup>N11</sup>	5	ug/kg	< 5
Perfluorotridecanoic acid (PFTeDA) <sup>N15</sup>	5	ug/kg	< 5
Perfluorotetradecanoic acid (PFTeDA) <sup>N11</sup>	5	ug/kg	< 5
13C4-PFBA (surr.)	1	%	96
13C5-PFPeA (surr.)	1	%	95
13C5-PFHxA (surr.)	1	%	87
13C4-PFHpA (surr.)	1	%	91
13C8-PFOA (surr.)	1	%	84
13C5-PFNA (surr.)	1	%	76
13C6-PFDA (surr.)	1	%	63
13C2-PFUnDA (surr.)	1	%	98
13C2-PFDoDA (surr.)	1	%	71
13C2-PFTeDA (surr.)	1	%	70
<b>Perfluoroalkyl sulfonamido substances</b>			
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	5	ug/kg	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	5	ug/kg	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	5	ug/kg	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	5	ug/kg	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	5	ug/kg	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	10	ug/kg	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	10	ug/kg	< 10
13C8-FOSA (surr.)	1	%	99
D3-N-MeFOSA (surr.)	1	%	80

<b>Client Sample ID</b>			<b>SX_OB_20220 414_04_02_SS _Primary_EUF</b>
<b>Sample Matrix</b>			<b>Soil</b>
<b>Eurofins Sample No.</b>			<b>M22- Ap0030626</b>
<b>Date Sampled</b>			<b>Apr 14, 2022</b>
Test/Reference	LOR	Unit	
<b>Perfluoroalkyl sulfonamido substances</b>			
D5-N-EtFOSA (surr.)	1	%	87
D7-N-MeFOSE (surr.)	1	%	77
D9-N-EtFOSE (surr.)	1	%	84
D5-N-EtFOSAA (surr.)	1	%	119
D3-N-MeFOSAA (surr.)	1	%	48
<b>Perfluoroalkyl sulfonic acids (PFASs)</b>			
Perfluorobutanesulfonic acid (PFBS) <sup>N11</sup>	5	ug/kg	< 5
Perfluorononanesulfonic acid (PFNS) <sup>N15</sup>	5	ug/kg	< 5
Perfluoropropanesulfonic acid (PFPrS) <sup>N15</sup>	5	ug/kg	< 5
Perfluoropentanesulfonic acid (PFPeS) <sup>N15</sup>	5	ug/kg	< 5
Perfluorohexanesulfonic acid (PFHxS) <sup>N11</sup>	5	ug/kg	< 5
Perfluoroheptanesulfonic acid (PFHpS) <sup>N15</sup>	5	ug/kg	< 5
Perfluorooctanesulfonic acid (PFOS) <sup>N11</sup>	5	ug/kg	< 5
Perfluorodecanesulfonic acid (PFDS) <sup>N15</sup>	5	ug/kg	< 5
13C3-PFBS (surr.)	1	%	81
18O2-PFHxS (surr.)	1	%	71
13C8-PFOS (surr.)	1	%	71
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) <sup>N11</sup>	10	ug/kg	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) <sup>N11</sup>	5	ug/kg	< 5
13C2-4:2 FTSA (surr.)	1	%	58
13C2-6:2 FTSA (surr.)	1	%	42
13C2-8:2 FTSA (surr.)	1	%	120
13C2-10:2 FTSA (surr.)	1	%	101
<b>PFASs Summations</b>			
Sum (PFHxS + PFOS)*	5	ug/kg	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50

**Sample History**

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

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

Description	Testing Site	Extracted	Holding Time
IWRG 621 WGTP Suite			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Apr 19, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Apr 19, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Apr 19, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	Apr 19, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	Apr 19, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Apr 19, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	Apr 19, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	Apr 19, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Apr 19, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Apr 19, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection - Method: LTM-INO-4230 Hexavalent Chromium by UV-Vis	Melbourne	Apr 19, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	Apr 19, 2022	14 Days
Fluoride (Total) - Method: LTM-INO-4150 Determination of Total Fluoride PART A – CIC - Method: LTM-INO-4150 Determination of Total Fluoride PART B – ISE	Melbourne	Apr 20, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Apr 19, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS - Method:	Melbourne	Apr 19, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Apr 14, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 19, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 19, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 19, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 19, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Apr 14, 2022	



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<b>Project Name:</b>	20220414042335-Eurofin-8	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_OB_20220413_08_25_S_S_Primary_EU_F	Apr 13, 2022	8:25AM	Soil	M22-Ap0030616		X	X	X
2	SX_OB_20220413_12_56_S_S_Primary_EU_F	Apr 13, 2022	12:56PM	Soil	M22-Ap0030617		X	X	X
3	SX_OB_20220413_12_43_S_S_Primary_EU_F	Apr 13, 2022	12:43PM	Soil	M22-Ap0030618		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_20220413_16_18_S_S_Primary_EU_F	Apr 13, 2022	4:18PM	Soil	M22-Ap0030619		X	X	X
5	SX_OB_20220413_08_18_S_S_Triplicate_EUF	Apr 13, 2022	8:18AM	Soil	M22-Ap0030620		X	X	X
6	SX_OB_20220413_16_20_S_S_Duplicate_EUF	Apr 13, 2022	4:20PM	Soil	M22-Ap0030621		X	X	X
7	SX_OB_20220413_16_49_S	Apr 13, 2022	4:49PM	Water	M22-Ap0030622			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>									
	R_Rinsate_EU F								
8	SX_OB_20220 413_16_41_S B_Blank_EUF	Apr 13, 2022	4:41PM	Water	M22- Ap0030623			X	
9	SX_OB_20220 413_20_17_S S_Primary_EU F	Apr 13, 2022	8:17PM	Soil	M22- Ap0030624		X	X	X
10	SX_OB_20220 414_00_06_S S_Primary_EU F	Apr 14, 2022	12:06AM	Soil	M22- Ap0030625		X	X	X
11	SX_OB_20220	Apr 14, 2022	4:02AM	Soil	M22-		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>									
	414_04_02_S S_Primary_EU F				Ap0030626				
12	SX_OB_20220 413_08_25_S S_Primary_EU F	Apr 13, 2022	8:25AM	AUS Leachate - pH 5.0	M22- Ap0030627	X		X	
13	SX_OB_20220 413_12_56_S S_Primary_EU F	Apr 13, 2022	12:56PM	AUS Leachate - pH 5.0	M22- Ap0030628	X		X	
14	SX_OB_20220 413_12_43_S S_Primary_EU	Apr 13, 2022	12:43PM	AUS Leachate - pH 5.0	M22- Ap0030629	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								
15	SX_OB_20220413_16_18_S_S_Primary_EU_F	Apr 13, 2022	4:18PM	AUS Leachate - pH 5.0	M22-Ap0030630	X		X	
16	SX_OB_20220413_08_18_S_S_Triplicate_EUF	Apr 13, 2022	8:18AM	AUS Leachate - pH 5.0	M22-Ap0030631	X		X	
17	SX_OB_20220413_16_20_S_S_Duplicate_EUF	Apr 13, 2022	4:20PM	AUS Leachate - pH 5.0	M22-Ap0030632	X		X	
18	SX_OB_20220	Apr 13, 2022	8:17PM	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>									
	413_20_17_S S_Primary_EU F			- pH 5.0	Ap0030633				
19	SX_OB_20220 414_00_06_S S_Primary_EU F	Apr 14, 2022	12:06AM	AUS Leachate - pH 5.0	M22- Ap0030634	X		X	
20	SX_OB_20220 414_04_02_S S_Primary_EU F	Apr 14, 2022	4:02AM	AUS Leachate - pH 5.0	M22- Ap0030635	X		X	
21	SX_OB_20220 413_08_25_S S_Primary_EU	Apr 13, 2022	8:25AM	AUS Leachate - Reagent Water	M22- Ap0030636	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	F								
22	SX_OB_20220413_12_56_S_S_Primary_EU_F	Apr 13, 2022	12:56PM	AUS Leachate - Reagent Water	M22-Ap0030637	X		X	
23	SX_OB_20220413_12_43_S_S_Primary_EU_F	Apr 13, 2022	12:43PM	AUS Leachate - Reagent Water	M22-Ap0030638	X		X	
24	SX_OB_20220413_16_18_S_S_Primary_EU_F	Apr 13, 2022	4:18PM	AUS Leachate - Reagent Water	M22-Ap0030639	X		X	
25	SX_OB_20220	Apr 13, 2022	8:18AM	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>									
	413_08_18_S S_Triplicate_E UF			- Reagent Water	Ap0030640				
26	SX_OB_20220 413_16_20_S S_Duplicate_E UF	Apr 13, 2022	4:20PM	AUS Leachate - Reagent Water	M22- Ap0030641	X		X	
27	SX_OB_20220 413_20_17_S S_Primary_EU F	Apr 13, 2022	8:17PM	AUS Leachate - Reagent Water	M22- Ap0030642	X		X	
28	SX_OB_20220 414_00_06_S S_Primary_EU	Apr 14, 2022	12:06AM	AUS Leachate - Reagent Water	M22- Ap0030643	X		X	



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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	F								
29	SX_OB_20220414_04_02_S_S_Primary_EU_F	Apr 14, 2022	4:02AM	AUS Leachate - Reagent Water	M22-Ap0030644	X		X	
<b>Test Counts</b>						18	9	29	9

## Internal Quality Control Review and Glossary

### General

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

### Holding Times

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

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

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

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

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

### Units

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

### Terms

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

### QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

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

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

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

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

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

### QC Data General Comments

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

**Quality Control Results**

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>						
<b>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	%	104			70-130	Pass	
TRH C10-C14	%	105			70-130	Pass	
Naphthalene	%	75			70-130	Pass	
TRH C6-C10	%	99			70-130	Pass	
TRH >C10-C16	%	104			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Volatile Organics</b>							
1.1-Dichloroethene	%	76			70-130	Pass	
1.1.1-Trichloroethane	%	75			70-130	Pass	
1.2-Dichlorobenzene	%	87			70-130	Pass	
1.2-Dichloroethane	%	102			70-130	Pass	
Benzene	%	103			70-130	Pass	
Ethylbenzene	%	95			70-130	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	94		70-130	Pass	
Toluene	%	98		70-130	Pass	
Trichloroethene	%	104		70-130	Pass	
Xylenes - Total*	%	93		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Polycyclic Aromatic Hydrocarbons</b>						
Acenaphthene	%	102		70-130	Pass	
Acenaphthylene	%	86		70-130	Pass	
Anthracene	%	98		70-130	Pass	
Benz(a)anthracene	%	80		70-130	Pass	
Benzo(a)pyrene	%	83		70-130	Pass	
Benzo(b&j)fluoranthene	%	73		70-130	Pass	
Benzo(g,h,i)perylene	%	92		70-130	Pass	
Benzo(k)fluoranthene	%	103		70-130	Pass	
Chrysene	%	78		70-130	Pass	
Dibenz(a,h)anthracene	%	86		70-130	Pass	
Fluoranthene	%	104		70-130	Pass	
Fluorene	%	77		70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	89		70-130	Pass	
Naphthalene	%	105		70-130	Pass	
Phenanthrene	%	96		70-130	Pass	
Pyrene	%	105		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Organochlorine Pesticides</b>						
Chlordanes - Total	%	106		70-130	Pass	
4,4'-DDD	%	105		70-130	Pass	
4,4'-DDE	%	100		70-130	Pass	
4,4'-DDT	%	79		70-130	Pass	
a-HCH	%	90		70-130	Pass	
Aldrin	%	111		70-130	Pass	
b-HCH	%	87		70-130	Pass	
d-HCH	%	104		70-130	Pass	
Dieldrin	%	122		70-130	Pass	
Endosulfan I	%	100		70-130	Pass	
Endosulfan II	%	101		70-130	Pass	
Endosulfan sulphate	%	92		70-130	Pass	
Endrin	%	101		70-130	Pass	
Endrin ketone	%	80		70-130	Pass	
g-HCH (Lindane)	%	87		70-130	Pass	
Heptachlor	%	100		70-130	Pass	
Heptachlor epoxide	%	129		70-130	Pass	
Hexachlorobenzene	%	90		70-130	Pass	
Methoxychlor	%	78		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Polychlorinated Biphenyls</b>						
Aroclor-1260	%	106		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Phenols (Halogenated)</b>						
2-Chlorophenol	%	89		25-140	Pass	
2,4-Dichlorophenol	%	72		25-140	Pass	
2,4,5-Trichlorophenol	%	94		25-140	Pass	
2,4,6-Trichlorophenol	%	59		25-140	Pass	
2,6-Dichlorophenol	%	73		25-140	Pass	
4-Chloro-3-methylphenol	%	66		25-140	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Pentachlorophenol	%	44		25-140	Pass	
Tetrachlorophenols - Total	%	69		25-140	Pass	
<b>LCS - % Recovery</b>						
<b>Phenols (non-Halogenated)</b>						
2-Cyclohexyl-4,6-dinitrophenol	%	52		25-140	Pass	
2-Methyl-4,6-dinitrophenol	%	33		25-140	Pass	
2-Nitrophenol	%	42		25-140	Pass	
2,4-Dimethylphenol	%	88		25-140	Pass	
2,4-Dinitrophenol	%	30		25-140	Pass	
2-Methylphenol (o-Cresol)	%	36		25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	32		25-140	Pass	
4-Nitrophenol	%	68		25-140	Pass	
Dinoseb	%	45		25-140	Pass	
Phenol	%	42		25-140	Pass	
<b>LCS - % Recovery</b>						
Chromium (hexavalent)	%	88		70-130	Pass	
Cyanide (total)	%	110		70-130	Pass	
Fluoride (Total)	%	74		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Heavy Metals</b>						
Arsenic	%	112		80-120	Pass	
Cadmium	%	109		80-120	Pass	
Chromium	%	114		80-120	Pass	
Copper	%	114		80-120	Pass	
Lead	%	120		80-120	Pass	
Mercury	%	108		80-120	Pass	
Molybdenum	%	111		80-120	Pass	
Nickel	%	111		80-120	Pass	
Selenium	%	107		80-120	Pass	
Silver	%	114		80-120	Pass	
Tin	%	110		80-120	Pass	
Zinc	%	114		80-120	Pass	
<b>LCS - % Recovery</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA)	%	90		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	100		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	92		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	90		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	91		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	121		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	86		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	88		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	95		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	105		50-150	Pass	
Perfluorotetradecanoic acid (PFTTeDA)	%	96		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)	%	123		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	89		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	84		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	102		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	79		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	77		50-150	Pass	



Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	87			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	124			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	115			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	109			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	112			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	93			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	137			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	136			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)	%	105			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	108			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	79			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	91			50-150	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Phenols (non-Halogenated)</b>				Result 1				
2,4-Dinitrophenol	M22-Ap0024169	NCP	%	43		30-130	Pass	
<b>Spike - % Recovery</b>								
				Result 1				
Chromium (hexavalent)	M22-Ap0035967	NCP	%	87		70-130	Pass	
Cyanide (total)	M22-Ap0002198	NCP	%	67		70-130	Fail	Q08
Fluoride (Total)	M22-Ap0033978	NCP	%	122		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Arsenic	L22-Ap0022820	NCP	%	100		75-125	Pass	
Chromium	L22-Ap0022820	NCP	%	103		75-125	Pass	
Nickel	L22-Ap0022820	NCP	%	100		75-125	Pass	
Zinc	L22-Ap0022820	NCP	%	103		75-125	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCA's)</b>				Result 1				
Perfluorobutanoic acid (PFBA)	M22-Ap0030616	CP	%	89		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ap0030616	CP	%	86		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ap0030616	CP	%	89		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ap0030616	CP	%	93		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ap0030616	CP	%	113		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ap0030616	CP	%	111		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ap0030616	CP	%	143		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0030616	CP	%	100		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ap0030616	CP	%	94		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0030616	CP	%	97		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0030616	CP	%	92		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>				Result 1				
Perfluorooctane sulfonamide (FOSA)	M22-Ap0034271	NCP	%	103		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0034271	NCP	%	102		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0034271	NCP	%	114		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0034271	NCP	%	86		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0034271	NCP	%	93		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ap0034271	NCP	%	78		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0034271	NCP	%	84		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>				Result 1				
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0034271	NCP	%	83		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ap0034271	NCP	%	123		50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0034271	NCP	%	105		50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0034271	NCP	%	84		50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0034271	NCP	%	82		50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0034271	NCP	%	63		50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0034271	NCP	%	92		50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0034271	NCP	%	119		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)</b>				Result 1				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ap0034271	NCP	%	97		50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0034271	NCP	%	94		50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0034271	NCP	%	94		50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0034271	NCP	%	72		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Total Recoverable Hydrocarbons</b>				Result 1				
TRH C6-C9	M22-Ap0030617	CP	%	99		70-130	Pass	
TRH C10-C14	M22-Ap0030617	CP	%	123		70-130	Pass	
Naphthalene	M22-Ap0030617	CP	%	127		70-130	Pass	
TRH C6-C10	M22-Ap0030617	CP	%	99		70-130	Pass	
TRH >C10-C16	M22-Ap0030617	CP	%	121		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Volatile Organics</b>				Result 1				
1.1-Dichloroethene	M22-Ap0030617	CP	%	74		70-130	Pass	
1.1.1-Trichloroethane	M22-Ap0030617	CP	%	70		70-130	Pass	
1.2-Dichlorobenzene	M22-Ap0030617	CP	%	111		70-130	Pass	
1.2-Dichloroethane	M22-Ap0030617	CP	%	107		70-130	Pass	
Benzene	M22-Ap0030617	CP	%	95		70-130	Pass	
Ethylbenzene	M22-Ap0030617	CP	%	100		70-130	Pass	
m&p-Xylenes	M22-Ap0030617	CP	%	105		70-130	Pass	
o-Xylene	M22-Ap0030617	CP	%	108		70-130	Pass	
Toluene	M22-Ap0030617	CP	%	109		70-130	Pass	
Trichloroethene	M22-Ap0030617	CP	%	91		70-130	Pass	
Xylenes - Total*	M22-Ap0030617	CP	%	106		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1				
Acenaphthene	M22-Ap0030617	CP	%	101		70-130	Pass	
Acenaphthylene	M22-Ap0030617	CP	%	72		70-130	Pass	
Anthracene	M22-Ap0030617	CP	%	91		70-130	Pass	
Benz(a)anthracene	M22-Ap0030617	CP	%	91		70-130	Pass	
Benzo(a)pyrene	M22-Ap0030617	CP	%	96		70-130	Pass	
Benzo(b&j)fluoranthene	M22-Ap0030617	CP	%	75		70-130	Pass	
Benzo(g,h,i)perylene	M22-Ap0030617	CP	%	90		70-130	Pass	
Benzo(k)fluoranthene	M22-Ap0030617	CP	%	92		70-130	Pass	
Chrysene	M22-Ap0030617	CP	%	103		70-130	Pass	
Dibenz(a,h)anthracene	M22-Ap0030617	CP	%	88		70-130	Pass	
Fluoranthene	M22-Ap0030617	CP	%	96		70-130	Pass	
Fluorene	M22-Ap0030617	CP	%	101		70-130	Pass	
Indeno(1,2,3-cd)pyrene	M22-Ap0030617	CP	%	91		70-130	Pass	
Naphthalene	M22-Ap0030617	CP	%	98		70-130	Pass	
Phenanthrene	M22-Ap0030617	CP	%	87		70-130	Pass	
Pyrene	M22-Ap0030617	CP	%	99		70-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (Halogenated)</b>				Result 1				
2-Chlorophenol	M22-Ap0030617	CP	%	64		30-130	Pass	
2,4-Dichlorophenol	M22-Ap0030617	CP	%	71		30-130	Pass	
2,4,5-Trichlorophenol	M22-Ap0030617	CP	%	78		30-130	Pass	
2,4,6-Trichlorophenol	M22-Ap0030617	CP	%	61		30-130	Pass	
2,6-Dichlorophenol	M22-Ap0030617	CP	%	70		30-130	Pass	
4-Chloro-3-methylphenol	M22-Ap0030617	CP	%	68		30-130	Pass	
Pentachlorophenol	M22-Ap0030617	CP	%	51		30-130	Pass	
Tetrachlorophenols - Total	M22-Ap0030617	CP	%	62		30-130	Pass	
<b>Spike - % Recovery</b>								
<b>Phenols (non-Halogenated)</b>				Result 1				
2-Cyclohexyl-4,6-dinitrophenol	M22-Ap0030617	CP	%	55		30-130	Pass	
2-Methyl-4,6-dinitrophenol	M22-Ap0030617	CP	%	39		30-130	Pass	
2-Nitrophenol	M22-Ap0030617	CP	%	60		30-130	Pass	
2,4-Dimethylphenol	M22-Ap0030617	CP	%	72		30-130	Pass	
2-Methylphenol (o-Cresol)	M22-Ap0030617	CP	%	55		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-Ap0030617	CP	%	64		30-130	Pass	
4-Nitrophenol	M22-Ap0030617	CP	%	54		30-130	Pass	
Dinoseb	M22-Ap0030617	CP	%	51		30-130	Pass	
Phenol	M22-Ap0030617	CP	%	61		30-130	Pass	
<b>Spike - % Recovery</b>								
<b>Heavy Metals</b>				Result 1				
Cadmium	M22-Ap0030617	CP	%	85		75-125	Pass	
Copper	M22-Ap0030617	CP	%	100		75-125	Pass	
Lead	M22-Ap0030617	CP	%	104		75-125	Pass	
Mercury	M22-Ap0030617	CP	%	101		75-125	Pass	
Molybdenum	M22-Ap0030617	CP	%	108		75-125	Pass	
Selenium	M22-Ap0030617	CP	%	97		75-125	Pass	
Silver	M22-Ap0030617	CP	%	88		75-125	Pass	
Tin	M22-Ap0030617	CP	%	106		75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Total Recoverable Hydrocarbons</b>				Result 1	Result 2	RPD			
TRH C6-C9	M22-Ap0030616	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M22-Ap0009408	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M22-Ap0009408	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M22-Ap0009408	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Naphthalene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M22-Ap0030616	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M22-Ap0009408	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M22-Ap0009408	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M22-Ap0009408	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
<b>Duplicate</b>									
<b>Volatile Organics</b>				Result 1	Result 2	RPD			
Hexachlorobutadiene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
<b>Duplicate</b>									
<b>Volatile Organics</b>				Result 1	Result 2	RPD			
1.1-Dichloroethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzene	M22-Ap0030616	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Bromobenzene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
<b>Volatile Organics</b>				Result 1	Result 2	RPD		
Dichlorodifluoromethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	M22-Ap0030616	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	M22-Ap0030616	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	M22-Ap0030616	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	M22-Ap0030616	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1,2-Dichloroethene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,3-Dichloropropene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-Ap0030616	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total*	M22-Ap0030616	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1	Result 2	RPD		
Acenaphthene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)anthracene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
<b>Organochlorine Pesticides</b>				Result 1	Result 2	RPD		
Chlordanes - Total	M22-Ap0023713	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
<b>Organochlorine Pesticides</b>				Result 1	Result 2	RPD		
Hexachlorobenzene	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-Ap0023713	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
<b>Polychlorinated Biphenyls</b>				Result 1	Result 2	RPD		
Aroclor-1016	M22-Ap0023713	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-Ap0023713	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-Ap0023713	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-Ap0023713	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-Ap0023713	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-Ap0023713	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-Ap0023713	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-Ap0023713	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
<b>Phenols (Halogenated)</b>				Result 1	Result 2	RPD		
2-Chlorophenol	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M22-Ap0023713	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M22-Ap0023713	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-Ap0023713	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-Ap0023713	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-Ap0023713	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-Ap0023713	NCP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M22-Ap0023713	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-Ap0023713	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	M22-Ap0023713	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-Ap0023713	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-Ap0023713	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M22-Ap0023713	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-Ap0023713	NCP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-Ap0023713	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Cyanide (total)	M22-Ap0030616	CP	mg/kg	< 5	< 5	<1	30%	Pass
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Ap0030616	CP	pH Units	8.3	8.4	pass	30%	Pass
% Moisture	M22-Ap0030616	CP	%	27	28	4.0	30%	Pass
Duplicate								
<b>Heavy Metals</b>				Result 1	Result 2	RPD		
Arsenic	M22-Ap0030616	CP	mg/kg	36	36	2.0	30%	Pass
Cadmium	M22-Ap0030616	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M22-Ap0030616	CP	mg/kg	100	100	2.0	30%	Pass
Copper	M22-Ap0030616	CP	mg/kg	59	60	2.0	30%	Pass
Lead	M22-Ap0030616	CP	mg/kg	< 5	< 5	<1	30%	Pass
Mercury	M22-Ap0030616	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M22-Ap0030616	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M22-Ap0030616	CP	mg/kg	190	190	2.0	30%	Pass
Selenium	M22-Ap0030616	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M22-Ap0030616	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-Ap0030616	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M22-Ap0030616	CP	mg/kg	100	110	3.0	30%	Pass

Duplicate				Result 1	Result 2	RPD		
Fluoride (Total)	M22-Ap0030617	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M22-Ap0030617	CP	mg/kg	69	71	3.0	30%	Pass
Cadmium	M22-Ap0030617	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M22-Ap0030617	CP	mg/kg	160	170	4.0	30%	Pass
Copper	M22-Ap0030617	CP	mg/kg	69	71	2.0	30%	Pass
Lead	M22-Ap0030617	CP	mg/kg	< 5	< 5	<1	30%	Pass
Mercury	M22-Ap0030617	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M22-Ap0030617	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M22-Ap0030617	CP	mg/kg	220	230	2.0	30%	Pass
Selenium	M22-Ap0030617	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M22-Ap0030617	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-Ap0030617	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M22-Ap0030617	CP	mg/kg	130	140	4.0	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-Ap0030626	CP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ap0030626	CP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0030626	CP	ug/kg	< 10	< 10	<1	30%	Pass

Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0030626	CP	ug/kg	< 10	< 10	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0030626	CP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0030626	CP	ug/kg	< 5	< 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).
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

**Authorised by:**

Catherine Wilson	Analytical Services Manager
Scott Beddoes	Senior Analyst (NSW)
Joseph Edouard	Senior Analyst (VIC)
Linda Chouman	Senior Analyst (NSW)
Mary Makarios	Senior Analyst (NSW)
Vivian Wang	Senior Analyst (VIC)
Caitlin Breeze	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  
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 **880173-W**  
Project name **20220414042335-Eurofin-8**  
Project ID **JC0927**  
Received Date **Apr 14, 2022**

Client Sample ID			SX_OB_20220 413_16_49_SR _Rinsate_EUF	SX_OB_20220 413_16_41_SB _Blank_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22- Ap0030622	M22- Ap0030623
Date Sampled			Apr 13, 2022	Apr 13, 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	%	90	87
13C5-PFPeA (surr.)	1	%	108	97
13C5-PFHxA (surr.)	1	%	129	116
13C4-PFHpA (surr.)	1	%	108	102
13C8-PFOA (surr.)	1	%	100	86
13C5-PFNA (surr.)	1	%	91	83
13C6-PFDA (surr.)	1	%	88	77
13C2-PFUnDA (surr.)	1	%	67	67
13C2-PFDoDA (surr.)	1	%	61	57
13C2-PFTeDA (surr.)	1	%	90	83
<b>Perfluoroalkyl sulfonamido substances</b>				
Perfluorooctane sulfonamide (FOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) <sup>N11</sup>	0.05	ug/L	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	79	72

Client Sample ID			SX_OB_20220 413_16_49_SR _Rinsate_EUF	SX_OB_20220 413_16_41_SB _Blank_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22- Ap0030622	M22- Ap0030623
Date Sampled			Apr 13, 2022	Apr 13, 2022
Test/Reference	LOR	Unit		
<b>Perfluoroalkyl sulfonamido substances</b>				
D3-N-MeFOSA (surr.)	1	%	78	41
D5-N-EtFOSA (surr.)	1	%	101	52
D7-N-MeFOSE (surr.)	1	%	62	55
D9-N-EtFOSE (surr.)	1	%	70	58
D5-N-EtFOSAA (surr.)	1	%	25	25
D3-N-MeFOSAA (surr.)	1	%	25	26
<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	96
18O2-PFHxS (surr.)	1	%	105	91
13C8-PFOS (surr.)	1	%	97	79
<b>n:2 Fluorotelomer sulfonic acids (n:2 FTSA)</b>				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) <sup>N11</sup>	0.01	ug/L	< 0.01	< 0.01
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	%	95	90
13C2-6:2 FTSA (surr.)	1	%	64	60
13C2-8:2 FTSA (surr.)	1	%	64	68
13C2-10:2 FTSA (surr.)	1	%	63	50
<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 14, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Apr 14, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Apr 14, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Apr 14, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Apr 14, 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 14, 2022 10:40 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	880173	<b>Due:</b>	Apr 26, 2022
<b>Project Name:</b>	20220414042335-Eurofin-8	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	Agon Lab Reports (Spoil Project)

**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_OB_20220413_08_25_S_S_Primary_EU_F	Apr 13, 2022	8:25AM	Soil	M22-Ap0030616		X	X	X
2	SX_OB_20220413_12_56_S_S_Primary_EU_F	Apr 13, 2022	12:56PM	Soil	M22-Ap0030617		X	X	X
3	SX_OB_20220413_12_43_S_S_Primary_EU_F	Apr 13, 2022	12:43PM	Soil	M22-Ap0030618		X	X	X

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 14, 2022 10:40 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	880173	<b>Due:</b>	Apr 26, 2022
<b>Project Name:</b>	20220414042335-Eurofin-8	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
4	SX_OB_20220413_16_18_S_S_Primary_EU_F	Apr 13, 2022	4:18PM	Soil	M22-Ap0030619		X	X	X
5	SX_OB_20220413_08_18_S_S_Triplicate_EUF	Apr 13, 2022	8:18AM	Soil	M22-Ap0030620		X	X	X
6	SX_OB_20220413_16_20_S_S_Duplicate_EUF	Apr 13, 2022	4:20PM	Soil	M22-Ap0030621		X	X	X
7	SX_OB_20220413_16_49_S	Apr 13, 2022	4:49PM	Water	M22-Ap0030622			X	

<b>Company Name:</b>	Agon Environmental Pty Ltd - VIC	<b>Order No.:</b>		<b>Received:</b>	Apr 14, 2022 10:40 AM
<b>Address:</b>	3/224 Glen Osmond Road Fullarton SA 5063	<b>Report #:</b>	880173	<b>Due:</b>	Apr 26, 2022
<b>Project Name:</b>	20220414042335-Eurofin-8	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
<b>Project ID:</b>	JC0927	<b>Fax:</b>		<b>Contact Name:</b>	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	R_Rinsate_EU F								
8	SX_OB_20220 413_16_41_S B_Blank_EUF	Apr 13, 2022	4:41PM	Water	M22- Ap0030623			X	
9	SX_OB_20220 413_20_17_S S_Primary_EU F	Apr 13, 2022	8:17PM	Soil	M22- Ap0030624		X	X	X
10	SX_OB_20220 414_00_06_S S_Primary_EU F	Apr 14, 2022	12:06AM	Soil	M22- Ap0030625		X	X	X
11	SX_OB_20220	Apr 14, 2022	4:02AM	Soil	M22-		X	X	X

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<b>Project Name:</b>	20220414042335-Eurofin-8	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	414_04_02_S S_Primary_EU F				Ap0030626				
12	SX_OB_20220 413_08_25_S S_Primary_EU F	Apr 13, 2022	8:25AM	AUS Leachate - pH 5.0	M22- Ap0030627	X		X	
13	SX_OB_20220 413_12_56_S S_Primary_EU F	Apr 13, 2022	12:56PM	AUS Leachate - pH 5.0	M22- Ap0030628	X		X	
14	SX_OB_20220 413_12_43_S S_Primary_EU	Apr 13, 2022	12:43PM	AUS Leachate - pH 5.0	M22- Ap0030629	X		X	



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<b>Project Name:</b>	20220414042335-Eurofin-8	<b>Phone:</b>	08 8338 1009	<b>Priority:</b>	5 Day
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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	F								
15	SX_OB_20220413_16_18_S_S_Primary_EU_F	Apr 13, 2022	4:18PM	AUS Leachate - pH 5.0	M22-Ap0030630	X		X	
16	SX_OB_20220413_08_18_S_S_Triplicate_EUF	Apr 13, 2022	8:18AM	AUS Leachate - pH 5.0	M22-Ap0030631	X		X	
17	SX_OB_20220413_16_20_S_S_Duplicate_EUF	Apr 13, 2022	4:20PM	AUS Leachate - pH 5.0	M22-Ap0030632	X		X	
18	SX_OB_20220	Apr 13, 2022	8:17PM	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>									
	413_20_17_S S_Primary_EU F			- pH 5.0	Ap0030633				
19	SX_OB_20220 414_00_06_S S_Primary_EU F	Apr 14, 2022	12:06AM	AUS Leachate - pH 5.0	M22- Ap0030634	X		X	
20	SX_OB_20220 414_04_02_S S_Primary_EU F	Apr 14, 2022	4:02AM	AUS Leachate - pH 5.0	M22- Ap0030635	X		X	
21	SX_OB_20220 413_08_25_S S_Primary_EU	Apr 13, 2022	8:25AM	AUS Leachate - Reagent Water	M22- Ap0030636	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_20220413_12_56_S_S_Primary_EU_F	Apr 13, 2022	12:56PM	AUS Leachate - Reagent Water	M22-Ap0030637	X		X	
23	SX_OB_20220413_12_43_S_S_Primary_EU_F	Apr 13, 2022	12:43PM	AUS Leachate - Reagent Water	M22-Ap0030638	X		X	
24	SX_OB_20220413_16_18_S_S_Primary_EU_F	Apr 13, 2022	4:18PM	AUS Leachate - Reagent Water	M22-Ap0030639	X		X	
25	SX_OB_20220	Apr 13, 2022	8:18AM	AUS Leachate	M22-	X		X	

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Fullarton  
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**Order No.:**  
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**Eurofins Analytical Services Manager : Michael Cassidy**

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>						X	X	X	X
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>									
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
	413_08_18_S S_Triplicate_E UF			- Reagent Water	Ap0030640				
26	SX_OB_20220 413_16_20_S S_Duplicate_E UF	Apr 13, 2022	4:20PM	AUS Leachate - Reagent Water	M22- Ap0030641	X		X	
27	SX_OB_20220 413_20_17_S S_Primary_EU F	Apr 13, 2022	8:17PM	AUS Leachate - Reagent Water	M22- Ap0030642	X		X	
28	SX_OB_20220 414_00_06_S S_Primary_EU	Apr 14, 2022	12:06AM	AUS Leachate - Reagent Water	M22- Ap0030643	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	F								
29	SX_OB_20220414_04_02_S_S_Primary_EU F	Apr 14, 2022	4:02AM	AUS Leachate - Reagent Water	M22-Ap0030644	X		X	
<b>Test Counts</b>						18	9	29	9

## Internal Quality Control Review and Glossary

### General

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

### Holding Times

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

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

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

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

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

### Units

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

### Terms

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

### QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

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

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

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

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

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

### QC Data General Comments

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

**Quality Control Results**

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>						
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>						
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05		0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01		0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01		0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01		0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01		0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01		0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01		0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01		0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01		0.01	Pass	
Perfluorotridecanoic acid (PFTTrDA)	ug/L	< 0.01		0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01		0.01	Pass	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonamido substances</b>						
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05		0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05		0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05		0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	< 0.05		0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05		0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05		0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05		0.05	Pass	
<b>Method Blank</b>						
<b>Perfluoroalkyl sulfonic acids (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)	%	110		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	110		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	104		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	91		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	97		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	92		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	87		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	119		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	120		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	146		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	112		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)	%	121			50-150	Pass		
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	109			50-150	Pass		
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	86			50-150	Pass		
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	105			50-150	Pass		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	93			50-150	Pass		
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	87			50-150	Pass		
<b>LCS - % Recovery</b>								
<b>Perfluoroalkyl sulfonic acids (PFSA's)</b>								
Perfluorobutanesulfonic acid (PFBS)	%	95			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	83			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	117			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	108			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	109			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	102			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	88			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	67			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)	%	112			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	133			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	119			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	95			50-150	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl carboxylic acids (PFCAs)</b>								
Perfluorobutanoic acid (PFBA)	M22-Ap0029217	NCP	%	80		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ap0029217	NCP	%	99		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ap0029217	NCP	%	98		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ap0029217	NCP	%	90		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ap0029217	NCP	%	95		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ap0029217	NCP	%	95		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ap0029217	NCP	%	98		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0029217	NCP	%	113		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ap0029217	NCP	%	112		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ap0029217	NCP	%	143		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0029217	NCP	%	117		50-150	Pass	
<b>Spike - % Recovery</b>								
<b>Perfluoroalkyl sulfonamido substances</b>								
Perfluorooctane sulfonamide (FOSA)	M22-Ap0029217	NCP	%	103		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0029217	NCP	%	121		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0029217	NCP	%	108		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0029217	NCP	%	109		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0029217	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-Ap0029217	NCP	%	128			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0029217	NCP	%	95			50-150	Pass	
<b>Spike - % Recovery</b>									
<b>Perfluoroalkyl sulfonic acids (PFSA)</b>				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M22-Ap0029217	NCP	%	96			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ap0029217	NCP	%	77			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0029217	NCP	%	114			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0029217	NCP	%	101			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0029217	NCP	%	102			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0029217	NCP	%	87			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0029217	NCP	%	82			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0029217	NCP	%	63			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-Ap0029217	NCP	%	103			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0029217	NCP	%	122			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0029217	NCP	%	120			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0029217	NCP	%	80			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-Ap0029209	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ap0029209	NCP	ug/L	0.02	0.02	1.0	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ap0029209	NCP	ug/L	0.06	0.06	3.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ap0029209	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ap0029209	NCP	ug/L	0.03	0.03	15	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ap0029209	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ap0029209	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ap0029209	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ap0029209	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTTrDA)	M22-Ap0029209	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ap0029209	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ap0029209	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ap0029209	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ap0029209	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ap0029209	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ap0029209	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ap0029209	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ap0029209	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-Ap0029209	NCP	ug/L	0.02	0.03	8.0	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ap0029209	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ap0029209	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ap0029209	NCP	ug/L	0.03	0.03	9.0	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ap0029209	NCP	ug/L	0.32	0.34	5.0	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ap0029209	NCP	ug/L	0.02	0.02	20	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ap0021530	NCP	ug/L	0.03	0.03	8.0	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ap0029209	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-Ap0029209	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ap0029209	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ap0029209	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ap0029209	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass

**Comments**
**Sample Integrity**

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

**Qualifier Codes/Comments**

Code	Description
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).

**Authorised by:**

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](#).

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CHAIN OF CUSTODY DOCUMENTATION										 Australian Laboratory Services Pty Ltd	
CLIENT: Agon Environmental					SAMPLER: Hannah - EP Risk Louis - EP Risk						
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: <a href="mailto:Labreports.TST@agonenviro.com.au">Labreports.TST@agonenviro.com.au</a> <a href="mailto:agonenvironmental@esdat.com.au">agonenvironmental@esdat.com.au</a> <a href="mailto:motherhublabresults1@wqtp.com.au">motherhublabresults1@wqtp.com.au</a>						
SITE: 20220413044154-ALS-21 P.O. NO.:					EMAIL INVOICE TO: (if different to report) <a href="mailto:Labreports.TST@agonenviro.com.au">Labreports.TST@agonenviro.com.au</a> <a href="mailto:agonenvironmental@esdat.com.au">agonenvironmental@esdat.com.au</a>						
RESULTS REQUIRED (Date): 5 days QUOTE NO.: ME-150-19 WGTP					ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)						
FOR LABORATORY USE ONLY COOLER SEAL (circle appropriate) Intact: Yes No N/A SAMPLE TEMPERATURE CHILLED: Yes No			COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:							Notes:	
SAMPLE INFORMATION (note: S = Soil, W=Water)							CONTAINER INFORMATION				
ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles	Spoil Sample Prep	P16 plus Cr	PFAS 28 Extended suite	ASLP PFAS - Extended Suite (Lab to determine pH)	DI Leachate PFAS - Extended Suite
12/ 1	SX_OB_20220412_07_43_SS_Primary_ALS	S	12.04.22	7:43	Bucket	1	x	x	x	x	x
13/ 2	SX_OB_20220412_07_44_SS_Duplicate_ALS	S	12.04.22	7:44	Bucket	1	x	x	x	x	x
14/ 3	SX_OB_20220412_07_55_SS_Primary_ALS	S	12.04.22	7:55	Bucket	1	x	x	x	x	x
4	SX_OB_20220412_09_23_SR_Rinsate_ALS	W	12.04.22	9:23	Bottle	1			x		
5	SX_OB_20220412_09_28_SB_Blank_ALS	W	12.04.22	9:28	Bottle	1			x		
15/ 6	SX_OB_20220412_17_19_SS_Triplicate_ALS	S	12.04.22	17:19	Bucket	1	x	x	x	x	x
16/ 7	SX_OB_20220412_17_22_SS_Primary_ALS	S	12.04.22	17:22	Bucket	1	x	x	x	x	x
17/ 8	SX_OB_20220412_17_27_SS_Primary_ALS	S	12.04.22	17:27	Bucket	1	x	x	x	x	x
18/ 9	SX_OB_20220412_20_04_SS_Primary_ALS	S	12.04.22	20:04	Bucket	1	x	x	x	x	x
19/ 10	SX_OB_20220412_23_59_SS_Primary_ALS	S	12.04.22	23:59	Bucket	1	x	x	x	x	x
20/ 11	SX_OB_20220413_04_01_SS_Primary_ALS	S	13.04.22	04:01	Bucket	1	x	x	x	x	x
RELINQUISHED BY:					RECEIVED BY:					METHOD OF SHIPMENT	
Name:			Date:		Name: <i>Hannah</i>			Date: <i>13/4</i>		Con' Note No:	
Of:			Time:		Name: <i>AS</i>			Time: <i>11:30</i>		Transport Co:	
Name:			Date:		Name:			Date:			
Of:			Time:		Of:			Time:			
<b>Water Container Codes:</b> P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; 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											

Environmental Division  
Melbourne  
Work Order Reference  
**EM2206764**



Telephone : + 61-3-8549 9600

## CERTIFICATE OF ANALYSIS

<b>Work Order</b> : <b>EM2206764</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> : 20220413044154-ALS-21 <b>Sampler</b> : Hannah - EP Risk, Louis - EP Risk <b>Site</b> : ---- <b>Quote number</b> : EN/150/19 -WGTP -Bulk Sample Quote <b>No. of samples received</b> : 20 <b>No. of samples analysed</b> : 20	<b>Page</b> : 1 of 29 <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> : 13-Apr-2022 11:35 <b>Date Analysis Commenced</b> : 13-Apr-2022 <b>Issue Date</b> : 21-Apr-2022 16:50
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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
Jarwis Nheu	Senior Inorganic 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.

- EP231X: Poor matrix spike recovery for sample EM2206760-004 due to sample matrix interference.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP074-UT: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074-WF: Where reported, Sum of trichlorobenzenes is the sum of the reported concentrations of 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene, and 1,3,5-Trichlorobenzene at or above the LOR.
- EP231X: Poor matrix spike recovery for sample EM2206725-022 due to sample matrix interference. Confirmed by re-analysis.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.
- EN60: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.
- EN60-DI: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.
- EP231X-INJ: The direct injection LCMSMS method may be used where the sample matrix is not suitable for Solid Phase Extraction (e.g. significant particulate load) or where only a single sample container is received.



## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220412_07_43_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS	SX_OB_20220412_07_55_SS_Primary_ALS	SX_OB_20220412_17_19_SS_Triplicate_ALS	SX_OB_20220412_17_22_SS_Primary_ALS
Sampling date / time				12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
Compound	CAS Number	LOR	Unit	EM2206764-001	EM2206764-002	EM2206764-003	EM2206764-006	EM2206764-007
				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_20220412_07_43_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS	SX_OB_20220412_07_55_SS_Primary_ALS	SX_OB_20220412_17_19_SS_Triplicate_ALS	SX_OB_20220412_17_22_SS_Primary_ALS
Sampling date / time				12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
Compound	CAS Number	LOR	Unit	EM2206764-001	EM2206764-002	EM2206764-003	EM2206764-006	EM2206764-007
				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	%	95.7	94.0	110	91.3	103
13C8-PFOA	----	0.02	%	102	102	104	102	99.4





## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220412_17_27_SS_Primary_ALS	SX_OB_20220412_20_04_SS_Primary_ALS	SX_OB_20220412_23_59_SS_Primary_ALS	SX_OB_20220413_04_01_SS_Primary_ALS	----
Sampling date / time				12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	----
Compound	CAS Number	LOR	Unit	EM2206764-008	EM2206764-009	EM2206764-010	EM2206764-011	-----
				Result	Result	Result	Result	----
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----



## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220412_17_27_SS_Primary_ALS	SX_OB_20220412_20_04_SS_Primary_ALS	SX_OB_20220412_23_59_SS_Primary_ALS	SX_OB_20220413_04_01_SS_Primary_ALS	----
Sampling date / time				12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	----
Compound	CAS Number	LOR	Unit	EM2206764-008	EM2206764-009	EM2206764-010	EM2206764-011	-----
				Result	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	<0.05	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	101	98.2	110	106	----
13C8-PFOA	----	0.02	%	103	104	102	100	----



## Analytical Results

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

Sample ID

				SX_OB_20220412_07_43_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS	SX_OB_20220412_07_55_SS_Primary_ALS	SX_OB_20220412_17_19_SS_Triplicate_ALS	SX_OB_20220412_17_22_SS_Primary_ALS
Sampling date / time				12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
Compound	CAS Number	LOR	Unit	EM2206764-012	EM2206764-013	EM2206764-014	EM2206764-015	EM2206764-016
				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_20220412_07_43_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS	SX_OB_20220412_07_55_SS_Primary_ALS	SX_OB_20220412_17_19_SS_Triplicate_ALS	SX_OB_20220412_17_22_SS_Primary_ALS
Sampling date / time				12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
Compound	CAS Number	LOR	Unit	EM2206764-012	EM2206764-013	EM2206764-014	EM2206764-015	EM2206764-016
				Result	Result	Result	Result	Result
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	92.9	94.8	97.8	91.0	97.7
13C8-PFOA	----	0.02	%	99.7	97.5	97.7	95.7	98.0



## Analytical Results

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

Sample ID

				SX_OB_20220412_17_27_SS_Primary_ALS	SX_OB_20220412_20_04_SS_Primary_ALS	SX_OB_20220412_23_59_SS_Primary_ALS	SX_OB_20220412_20_04_SS_Primary_ALS	----
Sampling date / time				12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	----
Compound	CAS Number	LOR	Unit	EM2206764-017	EM2206764-018	EM2206764-019	EM2206764-020	-----
				Result	Result	Result	Result	----
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----



## Analytical Results

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

Sample ID

				SX_OB_20220412_17_27_SS_Primary_ALS	SX_OB_20220412_20_04_SS_Primary_ALS	SX_OB_20220412_23_59_SS_Primary_ALS	SX_OB_20220412_20_04_SS_Primary_ALS	----
Sampling date / time				12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	----
Compound	CAS Number	LOR	Unit	EM2206764-017	EM2206764-018	EM2206764-019	EM2206764-020	-----
				Result	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	<0.05	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	96.7	92.0	91.4	96.5	----
13C8-PFOA	----	0.02	%	99.6	96.6	99.9	97.1	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220412_07_43_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS	SX_OB_20220412_07_55_SS_Primary_ALS	SX_OB_20220412_17_19_SS_Triplicate_ALS	SX_OB_20220412_17_22_SS_Primary_ALS
Sampling date / time				12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
Compound	CAS Number	LOR	Unit	EM2206764-001	EM2206764-002	EM2206764-003	EM2206764-006	EM2206764-007
				Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
pH (CaCl <sub>2</sub> )	----	0.1	pH Unit	7.7	7.7	7.7	7.8	7.9
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	32.4	29.9	30.2	24.6	33.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	38	38	42	29	28
Cadmium	7440-43-9	1	mg/kg	1	1	1	<1	<1
Chromium	7440-47-3	5	mg/kg	134	145	115	97	100
Copper	7440-50-8	5	mg/kg	64	68	59	47	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	191	204	133	179	188
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	102	106	79	70	93
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>								
Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
Total Cyanide	57-12-5	5	mg/kg	<5	<5	<5	<5	<5
<b>EK040T: Fluoride Total</b>								
Fluoride	16984-48-8	100	mg/kg	140	120	150	170	120
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Initial pH	----	0.1	pH Unit	8.8	8.9	9.1	9.5	9.4
After HCl pH	----	0.1	pH Unit	1.3	1.2	1.2	1.2	1.2
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	5.0	4.9	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_20220412_07_43_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS	SX_OB_20220412_07_55_SS_Primary_ALS	SX_OB_20220412_17_19_SS_Triplicate_ALS	SX_OB_20220412_17_22_SS_Primary_ALS
Sampling date / time				12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
Compound	CAS Number	LOR	Unit	EM2206764-001	EM2206764-002	EM2206764-003	EM2206764-006	EM2206764-007
				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

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Sampling date / time				12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
Compound	CAS Number	LOR	Unit	EM2206764-001	EM2206764-002	EM2206764-003	EM2206764-006	EM2206764-007
				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_20220412_07_43_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS	SX_OB_20220412_07_55_SS_Primary_ALS	SX_OB_20220412_17_19_SS_Triplicate_ALS	SX_OB_20220412_17_22_SS_Primary_ALS
Sampling date / time				12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
Compound	CAS Number	LOR	Unit	EM2206764-001	EM2206764-002	EM2206764-003	EM2206764-006	EM2206764-007
				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



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Sample ID

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Sampling date / time				12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
Compound	CAS Number	LOR	Unit	EM2206764-001	EM2206764-002	EM2206764-003	EM2206764-006	EM2206764-007
				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



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 (Matrix: SOIL)

Sample ID

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Sampling date / time				12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
Compound	CAS Number	LOR	Unit	EM2206764-001	EM2206764-002	EM2206764-003	EM2206764-006	EM2206764-007
				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_20220412_07_43_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS	SX_OB_20220412_07_55_SS_Primary_ALS	SX_OB_20220412_17_19_SS_Triplicate_ALS	SX_OB_20220412_17_22_SS_Primary_ALS
Sampling date / time				12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
Compound	CAS Number	LOR	Unit	EM2206764-001	EM2206764-002	EM2206764-003	EM2206764-006	EM2206764-007
				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	%	102	105	106	101	108
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	77.6	87.3	82.0	86.6	72.4
Toluene-D8	2037-26-5	0.1	%	80.6	91.7	86.3	88.9	75.0
4-Bromofluorobenzene	460-00-4	0.1	%	92.5	104	98.4	96.9	90.3
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>								
Phenol-d6	13127-88-3	0.025	%	86.2	88.2	91.6	87.3	88.7
2-Chlorophenol-D4	93951-73-6	0.025	%	77.9	79.8	83.1	79.1	83.4
2,4,6-Tribromophenol	118-79-6	0.025	%	77.0	75.5	78.4	75.9	77.9
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>								
Nitrobenzene-D5	4165-60-0	0.025	%	93.4	91.9	98.0	92.3	95.2
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	81.5	82.2	84.3	76.3	83.3
2-Fluorobiphenyl	321-60-8	0.025	%	88.0	87.9	92.4	90.4	90.2
Anthracene-d10	1719-06-8	0.025	%	87.8	87.2	91.5	91.3	89.3
4-Terphenyl-d14	1718-51-0	0.025	%	82.8	82.8	87.0	85.4	85.7
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.0002	%	101	99.1	93.0	91.7	97.2
13C8-PFOA	----	0.0002	%	85.5	101	112	106	101



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_OB_20220412_17_27_SS_Primary_ALS	SX_OB_20220412_20_04_SS_Primary_ALS	SX_OB_20220412_23_59_SS_Primary_ALS	SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_43_SS_Primary_ALS
Sampling date / time				12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	12-Apr-2022 07:43	
Compound	CAS Number	LOR	Unit	EM2206764-008	EM2206764-009	EM2206764-010	EM2206764-011	EM2206764-012	
				Result	Result	Result	Result	Result	
<b>EA001: pH in soil using 0.01M CaCl extract</b>									
pH (CaCl2)	----	0.1	pH Unit	7.7	7.7	7.7	7.8	----	
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	----	1.0	%	30.6	30.6	32.6	32.9	----	
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Arsenic	7440-38-2	5	mg/kg	37	30	43	29	----	
Cadmium	7440-43-9	1	mg/kg	2	<1	<1	<1	----	
Chromium	7440-47-3	5	mg/kg	144	123	121	102	----	
Copper	7440-50-8	5	mg/kg	68	60	64	74	----	
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	----	
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	<5	----	
Nickel	7440-02-0	5	mg/kg	192	176	139	215	----	
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	----	
Silver	7440-22-4	2	mg/kg	<2	<2	<2	<2	----	
Tin	7440-31-5	10	mg/kg	<10	<10	<10	<10	----	
Zinc	7440-66-6	5	mg/kg	97	92	81	109	----	
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----	
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>									
Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	----	
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	5	mg/kg	<5	<5	<5	<5	----	
<b>EK040T: Fluoride Total</b>									
Fluoride	16984-48-8	100	mg/kg	160	130	130	140	----	
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>									
Initial pH	----	0.1	pH Unit	9.5	9.7	8.8	9.1	----	
After HCl pH	----	0.1	pH Unit	1.2	1.2	1.3	1.2	----	
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	5.0	----	
Final pH	----	0.1	pH Unit	4.9	5.0	4.7	4.9	----	
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>									
Final pH	----	0.1	pH Unit	----	----	----	----	9.3	
<b>EP066: Polychlorinated Biphenyls (PCB)</b>									
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----	
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>									



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220412_17_27_SS_Primary_ALS	SX_OB_20220412_20_04_SS_Primary_ALS	SX_OB_20220412_23_59_SS_Primary_ALS	SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_43_SS_Primary_ALS
Sampling date / time				12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	12-Apr-2022 07:43
Compound	CAS Number	LOR	Unit	EM2206764-008	EM2206764-009	EM2206764-010	EM2206764-011	EM2206764-012
				Result	Result	Result	Result	Result
<b>EP074A: Monocyclic Aromatic Hydrocarbons - Continued</b>								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
meta- & para-Xylene	108-38-3	106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	----
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
<b>EP074H: Naphthalene</b>								
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	----
<b>EP074I: Volatile Halogenated Compounds</b>								
Vinyl chloride	75-01-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,1-Dichloroethene	75-35-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
trans-1,2-Dichloroethene	156-60-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
cis-1,2-Dichloroethene	156-59-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Chloroform	67-66-3	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,1,1-Trichloroethane	71-55-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Carbon Tetrachloride	56-23-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,2-Dichloroethane	107-06-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Trichloroethene	79-01-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,1,2-Trichloroethane	79-00-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Tetrachloroethene	127-18-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,1,1,2-Tetrachloroethane	630-20-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,1,2,2-Tetrachloroethane	79-34-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Hexachlorobutadiene	87-68-3	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Chlorobenzene	108-90-7	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,4-Dichlorobenzene	106-46-7	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,2-Dichlorobenzene	95-50-1	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,2,4-Trichlorobenzene	120-82-1	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
^ Sum of volatile chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
^ Sum of other chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>								



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID				
				SX_OB_20220412_17_27_SS_Primary_ALS	SX_OB_20220412_20_04_SS_Primary_ALS	SX_OB_20220412_23_59_SS_Primary_ALS	SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_43_SS_Primary_ALS
Sampling date / time				12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	12-Apr-2022 07:43
Compound	CAS Number	LOR	Unit	EM2206764-008	EM2206764-009	EM2206764-010	EM2206764-011	EM2206764-012
				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	<0.50	----
2,4-Dichlorophenol	120-83-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
2,6-Dichlorophenol	87-65-0	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	----
2,4,5-Trichlorophenol	95-95-4	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	----
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	----
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	----
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	----
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
Phenol	108-95-2	1	mg/kg	<1	<1	<1	<1	----
2-Methylphenol	95-48-7	1	mg/kg	<1	<1	<1	<1	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	----
2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	<1	<1	----
2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	<1	<1	----
2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	<5	<5	----
4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	<5	<5	----
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	<5	<5	----
Dinoseb	88-85-7	20	mg/kg	<20	<20	<20	<20	----
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	20	mg/kg	<20	<20	<20	<20	----
^ Sum of Phenols (non-halogenated)	----	20	mg/kg	<20	<20	<20	<20	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220412_17_27_SS_Primary_ALS	SX_OB_20220412_20_04_SS_Primary_ALS	SX_OB_20220412_23_59_SS_Primary_ALS	SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_43_SS_Primary_ALS
Sampling date / time				12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	12-Apr-2022 07:43
Compound	CAS Number	LOR	Unit	EM2206764-008	EM2206764-009	EM2206764-010	EM2206764-011	EM2206764-012
				Result	Result	Result	Result	Result
<b>EP075B: Polynuclear Aromatic Hydrocarbons - Continued</b>								
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	----
<b>EP075I: Organochlorine Pesticides</b>								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	----
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	----
Endosulfan 1	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endosulfan 2	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4,4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Methoxychlor	72-43-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
^ Sum of organochlorine pesticides	----	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.30	mg/kg	<0.30	<0.30	<0.30	<0.30	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220412_17_27_SS_Primary_ALS	SX_OB_20220412_20_04_SS_Primary_ALS	SX_OB_20220412_23_59_SS_Primary_ALS	SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_43_SS_Primary_ALS
Sampling date / time				12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	12-Apr-2022 07:43
Compound	CAS Number	LOR	Unit	EM2206764-008	EM2206764-009	EM2206764-010	EM2206764-011	EM2206764-012
				Result	Result	Result	Result	Result
<b>EP075I: Organochlorine Pesticides - Continued</b>								
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	----	20	mg/kg	<20	<20	<20	<20	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	----
C6 - C10 Fraction	C6_C10	20	mg/kg	<20	<20	<20	<20	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	----
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	mg/kg	<20	<20	<20	<20	----
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	5	µg/kg	<5	<5	<5	<5	----





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_OB_20220412_17_27_SS_Primary_ALS	SX_OB_20220412_20_04_SS_Primary_ALS	SX_OB_20220412_23_59_SS_Primary_ALS	SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_43_SS_Primary_ALS
Sampling date / time				12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	12-Apr-2022 07:43	
Compound	CAS Number	LOR	Unit	EM2206764-008	EM2206764-009	EM2206764-010	EM2206764-011	EM2206764-012	
				Result	Result	Result	Result	Result	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued</b>									
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----	
<b>EP231P: PFAS Sums</b>									
Sum of PFAS	----	50.0	µg/kg	<50.0	<50.0	<50.0	<50.0	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----	
Sum of PFAS (WA DER List)	----	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	----	
<b>EP066S: PCB Surrogate</b>									
Decachlorobiphenyl	2051-24-3	0.1	%	105	112	101	106	----	
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	75.1	85.4	92.3	70.5	----	
Toluene-D8	2037-26-5	0.1	%	76.9	91.2	95.4	70.2	----	
4-Bromofluorobenzene	460-00-4	0.1	%	89.0	99.8	103	84.5	----	
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>									
Phenol-d6	13127-88-3	0.025	%	83.9	92.9	85.7	87.6	----	
2-Chlorophenol-D4	93951-73-6	0.025	%	82.4	88.2	77.7	81.6	----	
2,4,6-Tribromophenol	118-79-6	0.025	%	74.9	76.6	71.1	77.6	----	
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>									
Nitrobenzene-D5	4165-60-0	0.025	%	91.6	99.6	90.5	92.1	----	
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	80.8	88.3	79.9	76.0	----	
2-Fluorobiphenyl	321-60-8	0.025	%	89.1	95.1	86.8	87.2	----	
Anthracene-d10	1719-06-8	0.025	%	88.4	94.2	86.0	89.7	----	
4-Terphenyl-d14	1718-51-0	0.025	%	84.2	89.2	81.1	85.9	----	
<b>EP231S: PFAS Surrogate</b>									
13C4-PFOS	----	0.0002	%	99.8	94.2	106	105	----	
13C8-PFOA	----	0.0002	%	101	107	105	95.4	----	



**Analytical Results**

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220412_07_44_SS_Duplicate_ALS	SX_OB_20220412_07_55_SS_Primary_ALS	SX_OB_20220412_17_19_SS_Triplicate_ALS	SX_OB_20220412_17_22_SS_Primary_ALS	SX_OB_20220412_17_27_SS_Primary_ALS
Sampling date / time				12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22	12-Apr-2022 17:27
Compound	CAS Number	LOR	Unit	EM2206764-013	EM2206764-014	EM2206764-015	EM2206764-016	EM2206764-017
				Result	Result	Result	Result	Result
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Final pH	----	0.1	pH Unit	9.3	9.4	9.3	9.5	9.5



**Analytical Results**

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_OB_20220412_20 _04_SS_Primary_ALS	SX_OB_20220412_23 _59_SS_Primary_ALS	SX_OB_20220412_20 _04_SS_Primary_ALS	----	----
Sampling date / time					12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	----	----
Compound	CAS Number	LOR	Unit		EM2206764-018	EM2206764-019	EM2206764-020	-----	-----
				Result	Result	Result		----	----
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>									
Final pH	----	0.1	pH Unit		9.5	9.3	9.4	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID		SX_OB_20220412_09 _23_SR_Rinsate_ALS	SX_OB_20220412_09 _28_SB_Blank_ALS	----	----	----
Sampling date / time			13-Apr-2022 09:23		13-Apr-2022 09:28		----	----	----
Compound	CAS Number	LOR	Unit	EM2206764-004	EM2206764-005	-----	-----	-----	
				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_20220412_09 _23_SR_Rinsate_ALS	SX_OB_20220412_09 _28_SB_Blank_ALS	----	----	----
Sampling date / time				13-Apr-2022 09:23	13-Apr-2022 09:28	----	----	----	
Compound	CAS Number	LOR	Unit	EM2206764-004	EM2206764-005	-----	-----	-----	
				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	%	103	103	----	----	----	
13C8-PFOA	----	0.02	%	105	107	----	----	----	





## 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

## Automated Guideline Comparison Report

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

<b>Work Order</b>	: <b>EM2206764</b>	Page	: 1 of 26
Client	: <b>AGON ENVIRONMENTAL PTY LTD</b>	Laboratory	: Environmental Division Melbourne
Contact	: Craig Trimbur		
Address	: D1.1 63-85 TURNER STREET PORT MELBOURNE 3207	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: Craig.Trimbur@eprisk.com.au	E-mail	: Josh.Alexander@alsglobal.com
Telephone	: ----	Telephone	: +61-3-8549 9600
Facsimile	: ----	Facsimile	: +61-3-8549 9626
Project	: JC0927	Date Received	: 13-Apr-2022 11:35
Order number	: ----	Date Analysed	: 13-Apr-2022
C-O-C number	: 20220413044154-ALS-21	Date Issued	: 21-Apr-2022 16:45
No. of samples received	: 20		
No. of samples analysed	: 20	Quote number	: EN/150/19 -WGTP -Bulk Sample Quote

#### General Comments

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

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

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

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

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



## Summary of Thresholds Reached or Exceeded

EPA Victoria Publication IWRG 621 (2009)

Table 2: Soil Hazard Categorisation Thresholds : Fill Material

Client Sample ID	ALS Sample ID	Compound	Method	LOR	Limits	Result
SX_OB_20220412_07_43 SS_Primary_ALS	EM2206764-001	Arsenic	EG005T	5	< 20 mg/kg	38 mg/kg
SX_OB_20220412_07_43 SS_Primary_ALS	EM2206764-001	Nickel	EG005T	5	< 60 mg/kg	191 mg/kg
SX_OB_20220412_07_44 SS_Duplicate_ALS	EM2206764-002	Arsenic	EG005T	5	< 20 mg/kg	38 mg/kg
SX_OB_20220412_07_44 SS_Duplicate_ALS	EM2206764-002	Nickel	EG005T	5	< 60 mg/kg	204 mg/kg
SX_OB_20220412_07_55 SS_Primary_ALS	EM2206764-003	Arsenic	EG005T	5	< 20 mg/kg	42 mg/kg
SX_OB_20220412_07_55 SS_Primary_ALS	EM2206764-003	Nickel	EG005T	5	< 60 mg/kg	133 mg/kg
SX_OB_20220412_17_19 SS_Triplicate_ALS	EM2206764-006	Arsenic	EG005T	5	< 20 mg/kg	29 mg/kg
SX_OB_20220412_17_19 SS_Triplicate_ALS	EM2206764-006	Nickel	EG005T	5	< 60 mg/kg	179 mg/kg
SX_OB_20220412_17_22 SS_Primary_ALS	EM2206764-007	Arsenic	EG005T	5	< 20 mg/kg	28 mg/kg
SX_OB_20220412_17_22 SS_Primary_ALS	EM2206764-007	Nickel	EG005T	5	< 60 mg/kg	188 mg/kg
SX_OB_20220412_17_27 SS_Primary_ALS	EM2206764-008	Arsenic	EG005T	5	< 20 mg/kg	37 mg/kg
SX_OB_20220412_17_27 SS_Primary_ALS	EM2206764-008	Nickel	EG005T	5	< 60 mg/kg	192 mg/kg
SX_OB_20220412_20_04 SS_Primary_ALS	EM2206764-009	Arsenic	EG005T	5	< 20 mg/kg	30 mg/kg
SX_OB_20220412_20_04 SS_Primary_ALS	EM2206764-009	Nickel	EG005T	5	< 60 mg/kg	176 mg/kg
SX_OB_20220412_23_59 SS_Primary_ALS	EM2206764-010	Arsenic	EG005T	5	< 20 mg/kg	43 mg/kg
SX_OB_20220412_23_59 SS_Primary_ALS	EM2206764-010	Nickel	EG005T	5	< 60 mg/kg	139 mg/kg
SX_OB_20220413_04_01 SS_Primary_ALS	EM2206764-011	Arsenic	EG005T	5	< 20 mg/kg	29 mg/kg
SX_OB_20220413_04_01 SS_Primary_ALS	EM2206764-011	Nickel	EG005T	5	< 60 mg/kg	215 mg/kg



## Analytical Results

### Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 412_07_43_S S_Primary_AL S	SX_OB_20220 412_07_44_S S_Duplicate_ ALS	SX_OB_20220 412_07_55_S S_Primary_AL S	SX_OB_20220 412_17_19_S S_Triplicate_ ALS	SX_OB_20220 412_17_22_S S_Primary_AL S	
				Sampling date/time	Guideline						Guideline
				Lower Limit	Upper Limit						
						12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22	
						EM2206764-001 MU	EM2206764-002 MU	EM2206764-003 MU	EM2206764-006 MU	EM2206764-007 MU	
<b>EA001: pH in soil using 0.01M CaCl extract</b>											
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5	7.7 ±0.1	7.7 ±0.1	7.7 ±0.1	7.8 ±0.1	7.9 ±0.1	
<b>EG005(ED093)T: Total Metals by ICP-AES</b>											
Arsenic	EG005T	5	mg/kg	----	2000	38 ±5	38 ±5	42 ±6	29 ±4	28 ±4	
Cadmium	EG005T	1	mg/kg	----	400	1 ±0.2	1 ±0.2	1 ±0.2	<1 --	<1 --	
Copper	EG005T	5	mg/kg	----	20000	64 ±8	68 ±8	59 ±7	47 ±6	65 ±8	
Lead	EG005T	5	mg/kg	----	6000	<5 --	<5 --	<5 --	<5 --	<5 --	
Molybdenum	EG005T	5	mg/kg	----	4000	<5 --	<5 --	<5 --	<5 --	<5 --	
Nickel	EG005T	5	mg/kg	----	12000	191 ±19	204 ±20	133 ±13	179 ±18	188 ±18	
Selenium	EG005T	5	mg/kg	----	200	<5 --	<5 --	<5 --	<5 --	<5 --	
Silver	EG005T	2	mg/kg	----	720	<2 --	<2 --	<2 --	<2 --	<2 --	
Zinc	EG005T	5	mg/kg	----	140000	102 ±11	106 ±12	79 ±9	70 ±8	93 ±10	
<b>EG035T: Total Recoverable Mercury by FIMS</b>											
Mercury	EG035T	0.1	mg/kg	----	300	<0.1 --	<0.1 --	<0.1 --	<0.1 --	<0.1 --	
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>											
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000	<1.0 --	<1.0 --	<1.0 --	<1.0 --	<1.0 --	
<b>EK026SF: Total CN by Segmented Flow Analyser</b>											
Total Cyanide	EK026SF	5	mg/kg	----	10000	<5 --	<5 --	<5 --	<5 --	<5 --	
<b>EK040T: Fluoride Total</b>											
Fluoride	EK040T	100	mg/kg	----	40000	140 ±30	120 ±30	150 ±40	170 ±40	120 ±30	
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>											
Benzene	EP074-UT	0.2	mg/kg	----	16	<0.2 --	<0.2 --	<0.2 --	<0.2 --	<0.2 --	
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	240	<0.5 --	<0.5 --	<0.5 --	<0.5 --	<0.5 --	
<b>EP074I: Volatile Halogenated Compounds</b>											
Vinyl chloride	EP074-UT	0.50	mg/kg	----	4.8	<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --	
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	11	<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --	
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	50	<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --	
<b>EP075A: Phenolic Compounds (Halogenated)</b>											
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	320	<1.00 --	<1.00 --	<1.00 --	<1.00 --	<1.00 --	



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	412_07_43_S	412_07_44_S	412_07_55_S	412_17_19_S	412_17_22_S
						S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
						EM2206764-001 MU	EM2206764-002 MU	EM2206764-003 MU	EM2206764-006 MU	EM2206764-007 MU
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	400	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
<b>EP075I: Organochlorine Pesticides</b>										
Heptachlor	EP075-EM	0.05	mg/kg	----	4.8	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	4.8	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	16	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	50	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	2600	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	40000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 412_07_43_S S_Primary_AL S	SX_OB_20220 412_07_44_S S_Duplicate_ ALS	SX_OB_20220 412_07_55_S S_Primary_AL S	SX_OB_20220 412_17_19_S S_Triplicate_ ALS	SX_OB_20220 412_17_22_S S_Primary_AL S
				Lower Limit	Upper Limit	12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
				EM2206764-001 MU	EM2206764-002 MU	EM2206764-003 MU	EM2206764-006 MU	EM2206764-007 MU		
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.7 ± 0.1	7.7 ± 0.1	7.7 ± 0.1	7.8 ± 0.1	7.9 ± 0.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	500	38 ± 5	38 ± 5	42 ± 6	29 ± 4	28 ± 4
Cadmium	EG005T	1	mg/kg	----	100	1 ± 0.2	1 ± 0.2	1 ± 0.2	<1 --	<1 --
Copper	EG005T	5	mg/kg	----	5000	64 ± 8	68 ± 8	59 ± 7	47 ± 6	65 ± 8
Lead	EG005T	5	mg/kg	----	1500	<5 --	<5 --	<5 --	<5 --	<5 --
Molybdenum	EG005T	5	mg/kg	----	1000	<5 --	<5 --	<5 --	<5 --	<5 --
Nickel	EG005T	5	mg/kg	----	3000	191 ± 19	204 ± 20	133 ± 13	179 ± 18	188 ± 18
Selenium	EG005T	5	mg/kg	----	50	<5 --	<5 --	<5 --	<5 --	<5 --
Silver	EG005T	2	mg/kg	----	180	<2 --	<2 --	<2 --	<2 --	<2 --
Tin	EG005T	10	mg/kg	----	500	<10 --	<10 --	<10 --	<10 --	<10 --
Zinc	EG005T	5	mg/kg	----	35000	102 ± 11	106 ± 12	79 ± 9	70 ± 8	93 ± 10
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 --	<0.1 --	<0.1 --	<0.1 --	<0.1 --
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	<1.0 --	<1.0 --	<1.0 --	<1.0 --	<1.0 --
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 --	<5 --	<5 --	<5 --	<5 --
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	10000	140 ± 30	120 ± 30	150 ± 40	170 ± 40	120 ± 30
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	4	<0.2 --	<0.2 --	<0.2 --	<0.2 --	<0.2 --
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	70	<0.5 --	<0.5 --	<0.5 --	<0.5 --	<0.5 --
<b>EP074I: Volatile Halogenated Compounds</b>										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	1.2	<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	2.8	<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	10	<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	10	<1.00 --	<1.00 --	<1.00 --	<1.00 --	<1.00 --



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	412_07_43_S	412_07_44_S	412_07_55_S	412_17_19_S	412_17_22_S
						S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
						EM2206764-001 MU	EM2206764-002 MU	EM2206764-003 MU	EM2206764-006 MU	EM2206764-007 MU
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	560	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	5	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	100	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
<b>EP075I: Organochlorine Pesticides</b>										
Heptachlor	EP075-EM	0.05	mg/kg	----	1.2	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	1.2	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	4	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	10	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	650	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	10000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 412_07_43_S S_Primary_AL S	SX_OB_20220 412_07_44_S S_Duplicate_ ALS	SX_OB_20220 412_07_55_S S_Primary_AL S	SX_OB_20220 412_17_19_S S_Triplicate_ ALS	SX_OB_20220 412_17_22_S S_Primary_AL S
				Guideline	Guideline	12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
				Lower Limit	Upper Limit	EM2206764-001 MU	EM2206764-002 MU	EM2206764-003 MU	EM2206764-006 MU	EM2206764-007 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.7 ± 0.1	7.7 ± 0.1	7.7 ± 0.1	7.8 ± 0.1	7.9 ± 0.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	20	38 ± 5	38 ± 5	42 ± 6	29 ± 4	28 ± 4
Cadmium	EG005T	1	mg/kg	----	3	1 ± 0.2	1 ± 0.2	1 ± 0.2	<1 --	<1 --
Copper	EG005T	5	mg/kg	----	100	64 ± 8	68 ± 8	59 ± 7	47 ± 6	65 ± 8
Lead	EG005T	5	mg/kg	----	300	<5 --	<5 --	<5 --	<5 --	<5 --
Molybdenum	EG005T	5	mg/kg	----	40	<5 --	<5 --	<5 --	<5 --	<5 --
Nickel	EG005T	5	mg/kg	----	60	191 ± 19	204 ± 20	133 ± 13	179 ± 18	188 ± 18
Selenium	EG005T	5	mg/kg	----	10	<5 --	<5 --	<5 --	<5 --	<5 --
Silver	EG005T	2	mg/kg	----	10	<2 --	<2 --	<2 --	<2 --	<2 --
Tin	EG005T	10	mg/kg	----	50	<10 --	<10 --	<10 --	<10 --	<10 --
Zinc	EG005T	5	mg/kg	----	200	102 ± 11	106 ± 12	79 ± 9	70 ± 8	93 ± 10
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 --	<0.1 --	<0.1 --	<0.1 --	<0.1 --
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	<1.0 --	<1.0 --	<1.0 --	<1.0 --	<1.0 --
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 --	<5 --	<5 --	<5 --	<5 --
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	450	140 ± 30	120 ± 30	150 ± 40	170 ± 40	120 ± 30
<b>EP066: Polychlorinated Biphenyls (PCB)</b>										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 --	<0.1 --	<0.1 --	<0.1 --	<0.1 --
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	1	<0.2 --	<0.2 --	<0.2 --	<0.2 --	<0.2 --
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	7	<0.5 --	<0.5 --	<0.5 --	<0.5 --	<0.5 --
<b>EP074I: Volatile Halogenated Compounds</b>										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 --	<1.00 --	<1.00 --	<1.00 --	<1.00 --
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										





**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	412_07_43_S	412_07_44_S	412_07_55_S	412_17_19_S	412_17_22_S
						S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	12-Apr-2022 07:43	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22
						EM2206764-001 MU	EM2206764-002 MU	EM2206764-003 MU	EM2206764-006 MU	EM2206764-007 MU
<b>EP075A: Phenolic Compounds (Non-halogenated) - Continued</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	60	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	1	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
<b>EP075I: Organochlorine Pesticides</b>										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	100	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	1000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	412_17_27_S	412_20_04_S	412_23_59_S	413_04_01_S	412_07_43_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	12-Apr-2022 07:43
						EM2206764-008 MU	EM2206764-009 MU	EM2206764-010 MU	EM2206764-011 MU	EM2206764-012 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5	7.7 ± 0.1	7.7 ± 0.1	7.7 ± 0.1	7.8 ± 0.1	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	2000	37 ± 5	30 ± 4	43 ± 6	29 ± 4	----
Cadmium	EG005T	1	mg/kg	----	400	2 ± 0.2	<1 --	<1 --	<1 --	----
Copper	EG005T	5	mg/kg	----	20000	68 ± 8	60 ± 7	64 ± 8	74 ± 9	----
Lead	EG005T	5	mg/kg	----	6000	<5 --	<5 --	<5 --	<5 --	----
Molybdenum	EG005T	5	mg/kg	----	4000	<5 --	<5 --	<5 --	<5 --	----
Nickel	EG005T	5	mg/kg	----	12000	192 ± 19	176 ± 17	139 ± 14	215 ± 21	----
Selenium	EG005T	5	mg/kg	----	200	<5 --	<5 --	<5 --	<5 --	----
Silver	EG005T	2	mg/kg	----	720	<2 --	<2 --	<2 --	<2 --	----
Zinc	EG005T	5	mg/kg	----	140000	97 ± 11	92 ± 10	81 ± 9	109 ± 12	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	300	<0.1 --	<0.1 --	<0.1 --	<0.1 --	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000	<1.0 --	<1.0 --	<1.0 --	<1.0 --	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	10000	<5 --	<5 --	<5 --	<5 --	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	40000	160 ± 40	130 ± 30	130 ± 30	140 ± 30	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	16	<0.2 --	<0.2 --	<0.2 --	<0.2 --	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	240	<0.5 --	<0.5 --	<0.5 --	<0.5 --	----
<b>EP074I: Volatile Halogenated Compounds</b>										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	4.8	<0.50 --	<0.50 --	<0.50 --	<0.50 --	----
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	11	<0.50 --	<0.50 --	<0.50 --	<0.50 --	----
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	50	<0.50 --	<0.50 --	<0.50 --	<0.50 --	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	320	<1.00 --	<1.00 --	<1.00 --	<1.00 --	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	412_17_27_S	412_20_04_S	412_23_59_S	413_04_01_S	412_07_43_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	12-Apr-2022 07:43
						EM2206764-008 MU	EM2206764-009 MU	EM2206764-010 MU	EM2206764-011 MU	EM2206764-012 MU
<b>EP075A: Phenolic Compounds (Non-halogenated) - Continued</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 ..	<20 ..	<20 ..	<20 ..	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	400	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----
<b>EP075I: Organochlorine Pesticides</b>										
Heptachlor	EP075-EM	0.05	mg/kg	----	4.8	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	----
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	4.8	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	----
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	----
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	16	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	----
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	50	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	2600	<20 ..	<20 ..	<20 ..	<20 ..	----
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	40000	<50 ..	<50 ..	<50 ..	<50 ..	----



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 412_17_27_S S_Primary_AL S	SX_OB_20220 412_20_04_S S_Primary_AL S	SX_OB_20220 412_23_59_S S_Primary_AL S	SX_OB_20220 413_04_01_S S_Primary_AL S	SX_OB_20220 412_07_43_S S_Primary_AL S
				Lower Limit	Upper Limit	12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	12-Apr-2022 07:43
						EM2206764-008 MU	EM2206764-009 MU	EM2206764-010 MU	EM2206764-011 MU	EM2206764-012 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.7 ± 0.1	7.7 ± 0.1	7.7 ± 0.1	7.8 ± 0.1	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	500	37 ± 5	30 ± 4	43 ± 6	29 ± 4	----
Cadmium	EG005T	1	mg/kg	----	100	2 ± 0.2	<1 ..	<1 ..	<1 ..	----
Copper	EG005T	5	mg/kg	----	5000	68 ± 8	60 ± 7	64 ± 8	74 ± 9	----
Lead	EG005T	5	mg/kg	----	1500	<5 ..	<5 ..	<5 ..	<5 ..	----
Molybdenum	EG005T	5	mg/kg	----	1000	<5 ..	<5 ..	<5 ..	<5 ..	----
Nickel	EG005T	5	mg/kg	----	3000	192 ± 19	176 ± 17	139 ± 14	215 ± 21	----
Selenium	EG005T	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	----
Silver	EG005T	2	mg/kg	----	180	<2 ..	<2 ..	<2 ..	<2 ..	----
Tin	EG005T	10	mg/kg	----	500	<10 ..	<10 ..	<10 ..	<10 ..	----
Zinc	EG005T	5	mg/kg	----	35000	97 ± 11	92 ± 10	81 ± 9	109 ± 12	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 ..	<5 ..	<5 ..	<5 ..	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	10000	160 ± 40	130 ± 30	130 ± 30	140 ± 30	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	4	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	70	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----
<b>EP074I: Volatile Halogenated Compounds</b>										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	1.2	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	----
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	2.8	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	----
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	10	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	10	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	----



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	412_17_27_S	412_20_04_S	412_23_59_S	413_04_01_S	412_07_43_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	12-Apr-2022 07:43
						EM2206764-008 MU	EM2206764-009 MU	EM2206764-010 MU	EM2206764-011 MU	EM2206764-012 MU
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	560	<20 ..	<20 ..	<20 ..	<20 ..	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	5	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	100	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----
<b>EP075I: Organochlorine Pesticides</b>										
Heptachlor	EP075-EM	0.05	mg/kg	----	1.2	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	----
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	1.2	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	----
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	----
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	4	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	----
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	10	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	650	<20 ..	<20 ..	<20 ..	<20 ..	----
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	10000	<50 ..	<50 ..	<50 ..	<50 ..	----



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 412_17_27_S S_Primary_AL S	SX_OB_20220 412_20_04_S S_Primary_AL S	SX_OB_20220 412_23_59_S S_Primary_AL S	SX_OB_20220 413_04_01_S S_Primary_AL S	SX_OB_20220 412_07_43_S S_Primary_AL S
				Guideline	Guideline	12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	12-Apr-2022 07:43
				Lower Limit	Upper Limit	EM2206764-008 MU	EM2206764-009 MU	EM2206764-010 MU	EM2206764-011 MU	EM2206764-012 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.7 ± 0.1	7.7 ± 0.1	7.7 ± 0.1	7.8 ± 0.1	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	20	37 ± 5	30 ± 4	43 ± 6	29 ± 4	----
Cadmium	EG005T	1	mg/kg	----	3	2 ± 0.2	<1 --	<1 --	<1 --	----
Copper	EG005T	5	mg/kg	----	100	68 ± 8	60 ± 7	64 ± 8	74 ± 9	----
Lead	EG005T	5	mg/kg	----	300	<5 --	<5 --	<5 --	<5 --	----
Molybdenum	EG005T	5	mg/kg	----	40	<5 --	<5 --	<5 --	<5 --	----
Nickel	EG005T	5	mg/kg	----	60	192 ± 19	176 ± 17	139 ± 14	215 ± 21	----
Selenium	EG005T	5	mg/kg	----	10	<5 --	<5 --	<5 --	<5 --	----
Silver	EG005T	2	mg/kg	----	10	<2 --	<2 --	<2 --	<2 --	----
Tin	EG005T	10	mg/kg	----	50	<10 --	<10 --	<10 --	<10 --	----
Zinc	EG005T	5	mg/kg	----	200	97 ± 11	92 ± 10	81 ± 9	109 ± 12	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 --	<0.1 --	<0.1 --	<0.1 --	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	<1.0 --	<1.0 --	<1.0 --	<1.0 --	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 --	<5 --	<5 --	<5 --	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	450	160 ± 40	130 ± 30	130 ± 30	140 ± 30	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 --	<0.1 --	<0.1 --	<0.1 --	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	1	<0.2 --	<0.2 --	<0.2 --	<0.2 --	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	7	<0.5 --	<0.5 --	<0.5 --	<0.5 --	----
<b>EP074I: Volatile Halogenated Compounds</b>										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 --	<0.50 --	<0.50 --	<0.50 --	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 --	<1.00 --	<1.00 --	<1.00 --	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	412_17_27_S	412_20_04_S	412_23_59_S	413_04_01_S	412_07_43_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	12-Apr-2022 17:27	12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01	12-Apr-2022 07:43
						EM2206764-008 MU	EM2206764-009 MU	EM2206764-010 MU	EM2206764-011 MU	EM2206764-012 MU
<b>EP075A: Phenolic Compounds (Non-halogenated) - Continued</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	60	<20 ..	<20 ..	<20 ..	<20 ..	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	1	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----
<b>EP075I: Organochlorine Pesticides</b>										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	100	<20 ..	<20 ..	<20 ..	<20 ..	----
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	1000	<50 ..	<50 ..	<50 ..	<50 ..	----



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	412_07_44_S	412_07_55_S	412_17_19_S	412_17_22_S	412_17_27_S
						S_Duplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	12-Apr-2022 07:44	12-Apr-2022 07:55	12-Apr-2022 17:19	12-Apr-2022 17:22	12-Apr-2022 17:27
						EM2206764-013 MU	EM2206764-014 MU	EM2206764-015 MU	EM2206764-016 MU	EM2206764-017 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----
<b>EG005(ED093T): Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	----	----	----	----	----	----
Cadmium	EG005T	1	mg/kg	----	----	----	----	----	----	----
Copper	EG005T	5	mg/kg	----	----	----	----	----	----	----
Lead	EG005T	5	mg/kg	----	----	----	----	----	----	----
Molybdenum	EG005T	5	mg/kg	----	----	----	----	----	----	----
Nickel	EG005T	5	mg/kg	----	----	----	----	----	----	----
Selenium	EG005T	5	mg/kg	----	----	----	----	----	----	----
Silver	EG005T	2	mg/kg	----	----	----	----	----	----	----
Zinc	EG005T	5	mg/kg	----	----	----	----	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	----	----	----	----	----	----
Vinyl chloride	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	----	----	----	----	----	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										















**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 412_20_04_S S_Primary_AL S	SX_OB_20220 412_23_59_S S_Primary_AL S	SX_OB_20220 412_20_04_S S_Primary_AL S	----	----
				Sampling date/time						
				Lower Limit	Upper Limit					
						12-Apr-2022 20:04	12-Apr-2022 23:59	12-Apr-2022 04:01		
						EM2206764-018 MU	EM2206764-019 MU	EM2206764-020 MU		
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----
<b>EG005(ED093T): Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	----	----	----	----	----	----
Cadmium	EG005T	1	mg/kg	----	----	----	----	----	----	----
Copper	EG005T	5	mg/kg	----	----	----	----	----	----	----
Lead	EG005T	5	mg/kg	----	----	----	----	----	----	----
Molybdenum	EG005T	5	mg/kg	----	----	----	----	----	----	----
Nickel	EG005T	5	mg/kg	----	----	----	----	----	----	----
Selenium	EG005T	5	mg/kg	----	----	----	----	----	----	----
Silver	EG005T	2	mg/kg	----	----	----	----	----	----	----
Zinc	EG005T	5	mg/kg	----	----	----	----	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	----	----	----	----	----	----
Vinyl chloride	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	----	----	----	----	----	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										













## QUALITY CONTROL REPORT

<b>Work Order</b>	<b>: EM2206764</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	: 13-Apr-2022
Order number	: ----	Date Analysis Commenced	: 13-Apr-2022
C-O-C number	: 20220413044154-ALS-21	Issue Date	: 21-Apr-2022
Sampler	: Hannah - EP Risk, Louis - EP Risk		
Site	: ----		
Quote number	: EN/150/19 -WGTP -Bulk Sample Quote		
No. of samples received	: 20		
No. of samples analysed	: 20		



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
Jarwis Nheu	Senior Inorganic 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: 4288842)</b>									
EM2206764-002	SX_OB_20220412_07_44_ SS_Duplicate_ALS	EG005T: Cadmium	7440-43-9	1	mg/kg	1	1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	145	142	2.1	0% - 20%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	204	205	0.0	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	38	34	9.7	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	68	65	4.5	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	106	102	4.2	0% - 20%		
EM2206769-021	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	30	35	16.0	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	12	15	18.9	No Limit
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	15	20	23.2	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	9	11	19.9	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	25	30	19.1	No Limit		

**EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4290056)**



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: 4290056) - continued</b>									
EM2206759-014	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	5.2	5.3	0.0	0% - 20%
EM2206764-003	SX_OB_20220412_07_55_ SS_Primary_ALS	EA001: pH (CaCl2)	----	0.1	pH Unit	7.7	7.7	0.0	0% - 20%
<b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4289961)</b>									
EM2206764-001	SX_OB_20220412_07_43_ SS_Primary_ALS	EA055: Moisture Content	----	0.1	%	32.4	31.9	1.6	0% - 20%
<b>EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4288841)</b>									
EM2206406-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2206406-053	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.1	0.2	59.4	No Limit
<b>EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4288843)</b>									
EM2206764-002	SX_OB_20220412_07_44_ SS_Duplicate_ALS	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2206769-021	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: 4289918)</b>									
EM2206663-003	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM2206718-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 4289919)</b>									
EM2206764-006	SX_OB_20220412_17_19_ SS_Triplicate_ALS	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
EM2206881-007	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
<b>EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4292420)</b>									
EM2206760-002	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EM2206664-004	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
<b>EK040T: Fluoride Total (QC Lot: 4289915)</b>									
EM2206663-003	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	270	370	31.1	No Limit
EM2206746-002	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	180	140	28.5	No Limit
<b>EK040T: Fluoride Total (QC Lot: 4289916)</b>									
EM2206764-011	SX_OB_20220413_04_01_ SS_Primary_ALS	EK040T: Fluoride	16984-48-8	40	mg/kg	140	130	0.0	No Limit
<b>EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4287890)</b>									
EM2206664-001	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2206764-003	SX_OB_20220412_07_55_ 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: 4285915)</b>									
EM2206764-001	SX_OB_20220412_07_43_ 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: 4285915) - continued</b>									
EM2206764-001	SX_OB_20220412_07_43_ 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: 4285915)</b>									
EM2206764-001	SX_OB_20220412_07_43_ 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: 4285915)</b>									
EM2206764-001	SX_OB_20220412_07_43_ 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: 4287892)</b>									
EM2206664-001	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-9 0-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit



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: 4287892) - continued</b>									
EM2206764-003	SX_OB_20220412_07_55_ SS_Primary_ALS	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit		
<b>EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4287892)</b>									
EM2206664-001	Anonymous	EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	<5	0.0	No Limit
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	<5	0.0	No Limit		
EM2206764-003	SX_OB_20220412_07_55_ SS_Primary_ALS	EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: Dinoseb	88-85-7	5	mg/kg	<20	<20	0.0	No Limit
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<20	<20	0.0	No Limit		
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4287892)</b>									
EM2206664-001	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





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: 4287892) - continued</b>									
EM2206664-001	Anonymous	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
EM2206764-003	SX_OB_20220412_07_55_ SS_Primary_ALS	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	<1.0	0.0	No Limit
<b>EP075I: Organochlorine Pesticides (QC Lot: 4287892)</b>									
EM2206664-001	Anonymous	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	<0.03	0.0	No Limit



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: 4287892) - continued</b>									
EM2206664-001	Anonymous	EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EM2206764-003	SX_OB_20220412_07_55_ 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: 4285915)</b>									
EM2206764-001	SX_OB_20220412_07_43_ 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: 4287891)</b>									
EM2206664-001	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
EM2206764-003	SX_OB_20220412_07_55_ 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



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: 4287891) - continued</b>									
EM2206764-003	SX_OB_20220412_07_55_ SS_Primary_ALS	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: 4285915)</b>									
EM2206764-001	SX_OB_20220412_07_43_ 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: 4287891)</b>									
EM2206664-001	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
EM2206764-003	SX_OB_20220412_07_55_ 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: 4292359)</b>									
EM2206406-123	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2206764-003	SX_OB_20220412_07_55_ SS_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4292359)</b>									
EM2206406-123	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: 4292359) - continued</b>									
EM2206406-123	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
EM2206764-003	SX_OB_20220412_07_55_ 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: 4292359)</b>									
EM2206406-123	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
EM2206764-003	SX_OB_20220412_07_55_ 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: 4292359) - continued</b>									
EM2206764-003	SX_OB_20220412_07_55_ 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: 4292359)</b>									
EM2206406-123	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
EM2206764-003	SX_OB_20220412_07_55_ 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: 4292359)</b>									
EM2206406-123	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2206764-003	SX_OB_20220412_07_55_ 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
<b>Sub-Matrix: WATER</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>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4292089)</b>									
EM2206397-011	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
EM2206764-011	SX_OB_20220413_04_01_ SS_Primary_ALS	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: 4292089) - continued</b>									
EM2206764-011	SX_OB_20220413_04_01_ SS_Primary_ALS	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: 4292096)</b>									
EM2206760-003	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.07	0.06	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
EM2206766-005	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4292461)</b>									
EM2206562-003	Anonymous	EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4292089)</b>									
EM2206397-011	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



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: 4292089) - continued</b>									
EM2206397-011	Anonymous	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
EM2206764-011	SX_OB_20220413_04_01_ 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: 4292096)</b>									
EM2206760-003	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.03	0.04	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
EM2206766-005	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		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: 4292461)**



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: 4292461) - continued</b>									
EM2206562-003	Anonymous	EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	<0.10	0.0	No Limit		
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4292089)</b>									
EM2206397-011	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
EM2206764-011	SX_OB_20220413_04_01_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

**EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4292096)**





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: 4292096) - continued</b>									
EM2206760-003	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2206766-005	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4292461)</b>									
EM2206562-003	Anonymous	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit



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: 4292089)</b>									
EM2206397-011	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
EM2206764-011	SX_OB_20220413_04_01_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: 4292096)</b>									
EM2206760-003	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2206766-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		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: 4292461)</b>									
EM2206562-003	Anonymous	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit



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: 4292461) - continued</b>									
EM2206562-003	Anonymous	EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231P: PFAS Sums (QC Lot: 4292089)</b>									
EM2206397-011	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
EM2206764-011	SX_OB_20220413_04_01_ 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: 4292096)</b>									
EM2206760-003	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.11	0.10	9.5	0% - 50%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763- 23-1	0.01	µg/L	0.08	0.06	28.6	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	0.11	0.10	9.5	0% - 50%
EM2206766-005	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763- 23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
<b>EP231P: PFAS Sums (QC Lot: 4292461)</b>									
EM2206562-003	Anonymous	EP231X-INJ: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Sum of PFHxS and PFOS	355-46-4/1763- 23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit



## 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: 4288842)</b>									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	100	70.0	130	
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	66.1	50.0	130	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	100	70.0	130	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	93.3	70.0	130	
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	92.8	70.0	130	
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	83.6	70.0	130	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	96.2	70.0	130	
EG005T: Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----	
EG005T: Silver	7440-22-4	2	mg/kg	<2	2.9 mg/kg	79.8	70.0	130	
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	72.4	70.0	130	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	74.4	70.0	130	
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4288063)</b>									
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.5	----	----	----	----	
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4288064)</b>									
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.5	----	----	----	----	
<b>EA001: pH in soil using 0.01M CaCl extract (QCLot: 4290056)</b>									
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	100	98.8	101	
				----	7 pH Unit	101	99.3	101	
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4288841)</b>									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	111	70.0	130	
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4288843)</b>									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	105	70.0	130	
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4289918)</b>									
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	80.0	70.0	130	
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4289919)</b>									
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	80.9	70.0	130	
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4292420)</b>									
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	97.7	70.0	130	
<b>EK040T: Fluoride Total (QCLot: 4289915)</b>									
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	81.4	75.2	110	
<b>EK040T: Fluoride Total (QCLot: 4289916)</b>									
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	78.9	75.2	110	
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4287890)</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: 4287890) - continued</b>									
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	98.9	67.4	136	
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4285915)</b>									
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	98.7	69.2	116	
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	94.4	67.7	116	
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	95.0	66.6	115	
EP074-UT: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	4.2 mg/kg	93.0	65.2	112	
	106-42-3								
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	90.8	69.4	111	
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	90.9	68.4	110	
<b>EP074H: Naphthalene (QCLot: 4285915)</b>									
EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	0.6 mg/kg	102	72.3	114	
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4285915)</b>									
EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	128	47.0	138	
EP074-UT: 1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	111	57.6	125	
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	98.2	72.3	115	
EP074-UT: trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	109	60.5	122	
EP074-UT: cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	99.0	70.3	112	
EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	99.0	66.6	115	
EP074-UT: 1,1,1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	102	64.4	122	
EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	105	58.4	127	
EP074-UT: 1,2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	98.6	72.9	114	
EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	97.2	64.7	115	
EP074-UT: 1,1,2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	97.8	72.6	116	
EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	98.8	60.0	119	
EP074-UT: 1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	91.2	71.8	116	
EP074-UT: 1,1,2,2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	88.3	66.1	116	
EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	95.5	39.8	128	
EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	99.2	70.3	113	
EP074-UT: 1,4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	104	62.6	113	
EP074-UT: 1,2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	98.8	70.8	110	
EP074-UT: 1,2,4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	105	48.4	120	
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4287892)</b>									
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	88.6	74.5	126	
EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	90.4	72.7	126	
EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	94.6	73.5	132	
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	91.3	72.8	128	
EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	2 mg/kg	94.6	73.3	134	
EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	2 mg/kg	90.7	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: 4287892) - continued</b>									
EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	87.7	69.4	126	
EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/5 8-90-2	0.05	mg/kg	<0.05	4 mg/kg	95.1	71.9	128	
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	90.8	54.4	135	
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4287892)</b>									
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	99.7	71.5	130	
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	96.5	73.4	129	
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	98.2	74.3	129	
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	88.5	70.9	133	
EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	91.6	71.8	132	
EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	86.2	41.0	156	
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	92.8	65.3	134	
EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	91.2	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	90.1	62.0	128	
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	97.1	34.5	137	
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4287892)</b>									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	93.2	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	93.5	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	91.7	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	93.4	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	93.7	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	93.6	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	92.8	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	94.7	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	94.4	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	96.0	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	98.2	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	96.6	65.1	130	
EP075-EM: Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	95.2	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	96.1	72.9	135	
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	95.5	71.3	134	
<b>EP075I: Organochlorine Pesticides (QCLot: 4287892)</b>									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	92.8	71.0	129	
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	92.6	74.8	126	
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	95.9	75.7	130	
EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	2 mg/kg	94.8	70.8	130	
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	96.2	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: 4287892) - continued</b>									
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	93.1	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	93.9	76.8	130	
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	93.0	73.6	130	
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	92.6	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	92.5	75.3	131	
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	93.7	69.4	134	
EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	95.5	71.0	132	
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	94.8	78.0	133	
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	119	69.0	143	
EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	2 mg/kg	95.3	55.7	145	
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	95.0	71.4	135	
EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	88.0	74.8	134	
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	98.2	70.2	135	
EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	110	77.7	133	
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	107	63.6	135	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4285915)</b>									
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	111	61.1	119	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4287891)</b>									
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	680 mg/kg	96.7	74.4	129	
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	2830 mg/kg	100	81.0	123	
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1340 mg/kg	102	81.8	121	
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	4850 mg/kg	100	70.0	130	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4285915)</b>									
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	110	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: 4287891)</b>									
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	980 mg/kg	95.5	75.4	132	
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	3210 mg/kg	114	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	270 mg/kg	94.6	73.3	136	
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	4460 mg/kg	109	70.0	130	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4292359)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	91.6	72.0	128	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	83.8	73.0	123	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	78.9	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	99.2	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	104	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	88.8	59.0	134	



Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report				
					Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4292359)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	88.3	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.1	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.8	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.1	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.0	69.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.4	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.8	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.7	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.7	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	97.4	69.0	133	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4292359)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	90.5	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	90.3	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	100	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.4	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.3	61.0	139	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4292359)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	91.0	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	103	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	90.1	70.0	130	
<b>EP231P: PFAS Sums (QCLot: 4292359)</b>									
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----	
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----	
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----	

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report				
					Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4292089)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	106	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: 4292089) - continued</b>									
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	98.5	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	95.9	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	95.2	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	90.1	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	81.7	53.0	142	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4292096)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	101	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	95.4	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	96.2	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	102	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	102	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	96.9	53.0	142	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4292461)</b>									
EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.444 µg/L	102	72.0	130	
EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.47 µg/L	92.6	71.0	127	
EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.457 µg/L	93.6	68.0	131	
EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.477 µg/L	98.2	69.0	134	
EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.465 µg/L	90.9	65.0	140	
EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.482 µg/L	103	53.0	142	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4292089)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	90.3	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	99.0	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	98.3	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	96.0	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	93.6	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	99.8	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	102	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	91.7	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	90.1	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	90.5	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	98.8	71.0	132	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4292096)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	95.8	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	85.0	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	105	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	98.1	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	97.2	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	95.2	69.0	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>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4292096) - continued</b>								
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	109	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	89.8	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	101	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	88.4	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	110	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4292461)</b>								
EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	2.5 µg/L	93.4	73.0	129
EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.5 µg/L	104	72.0	129
EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.5 µg/L	92.1	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	92.6	71.0	133
EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.5 µg/L	97.2	69.0	130
EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.5 µg/L	84.8	71.0	129
EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.5 µg/L	82.6	69.0	133
EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.5 µg/L	101	72.0	134
EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.5 µg/L	80.4	65.0	144
EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	1.25 µg/L	95.8	71.0	132
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4292089)</b>								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	97.1	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	87.1	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	86.6	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	82.8	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	94.0	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	105	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	107	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4292096)</b>								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	110	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	97.6	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	102	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	96.6	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	101	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	98.3	65.0	136



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: 4292096) - continued</b>								
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	114	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4292461)</b>								
EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.5 µg/L	102	67.0	137
EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	1.25 µg/L	92.6	68.0	141
EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	1.25 µg/L	100	70.0	130
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	1.25 µg/L	92.4	70.0	130
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	1.25 µg/L	99.1	70.0	130
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.5 µg/L	106	65.0	136
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.5 µg/L	112	61.0	135
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4292089)</b>								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	95.4	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	98.5	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	112	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	87.6	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4292096)</b>								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	95.1	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	107	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	122	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	92.7	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4292461)</b>								
EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.469 µg/L	99.0	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	114	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	110	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	70.5	70.0	130
<b>EP231P: PFAS Sums (QCLot: 4292089)</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: 4292096)</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: 4292096) - continued</b>								
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----
<b>EP231P: PFAS Sums (QCLot: 4292461)</b>								
EP231X-INJ: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X-INJ: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X-INJ: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

### 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: 4288842)</b>							
EM2206764-003	SX_OB_20220412_07_55_SS_Primary_ALS	EG005T: Arsenic	7440-38-2	50 mg/kg	89.1	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	103	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	114	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	118	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	101	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	117	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	94.4	80.0	120
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4288841)</b>							
EM2206406-007	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	105	76.0	116
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4288843)</b>							
EM2206764-003	SX_OB_20220412_07_55_SS_Primary_ALS	EG035T: Mercury	7439-97-6	0.5 mg/kg	108	76.0	116
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4289918)</b>							
EM2206664-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	80.2	58.0	114
EM2206664-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	98.2	58.0	114
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4289919)</b>							
EM2206764-007	SX_OB_20220412_17_22_SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	88.8	58.0	114
EM2206764-007	SX_OB_20220412_17_22_SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	100	58.0	114
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4292420)</b>							
EM2206664-004	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	104	70.0	130
<b>EK040T: Fluoride Total (QCLot: 4289915)</b>							



Sub-Matrix: SOIL

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EK040T: Fluoride Total (QCLot: 4289915) - continued</b>							
EM2206664-001	Anonymous	EK040T: Fluoride	16984-48-8	400 mg/kg	80.8	70.0	130
<b>EK040T: Fluoride Total (QCLot: 4289916)</b>							
EM2206766-001	Anonymous	EK040T: Fluoride	16984-48-8	400 mg/kg	75.5	70.0	130
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4287890)</b>							
EM2206664-004	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	93.1	59.6	152
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4285915)</b>							
EM2206764-002	SX_OB_20220412_07_44_SS_Duplicate_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	83.1	53.7	130
		EP074-UT: Toluene	108-88-3	2 mg/kg	83.4	55.1	124
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4285915)</b>							
EM2206764-002	SX_OB_20220412_07_44_SS_Duplicate_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	77.8	38.4	145
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	76.8	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	79.9	55.5	122
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4287892)</b>							
EM2206664-003	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	88.6	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	89.5	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	65.4	10.0	144
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4287892)</b>							
EM2206664-003	Anonymous	EP075-EM: Phenol	108-95-2	3 mg/kg	88.9	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	86.9	34.2	129
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4287892)</b>							
EM2206664-003	Anonymous	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	74.0	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	79.1	37.8	152
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4285915)</b>							
EM2206764-002	SX_OB_20220412_07_44_SS_Duplicate_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	88.6	42.3	111
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4287891)</b>							
EM2206664-002	Anonymous	EP071-EM: C10 - C14 Fraction	----	680 mg/kg	99.1	71.3	126
		EP071-EM: C15 - C28 Fraction	----	2830 mg/kg	102	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1340 mg/kg	104	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	4850 mg/kg	102	70.0	130
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4285915)</b>							
EM2206764-002	SX_OB_20220412_07_44_SS_Duplicate_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	87.8	39.9	109
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4287891)</b>							
EM2206664-002	Anonymous	EP071-EM: >C10 - C16 Fraction	----	980 mg/kg	97.2	71.5	130
		EP071-EM: >C16 - C34 Fraction	----	3210 mg/kg	116	76.9	119
		EP071-EM: >C34 - C40 Fraction	----	270 mg/kg	99.4	65.3	139



Sub-Matrix: SOIL

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	SpikeRecovery(%) MS	Acceptable Limits (%)	
				Low	High		
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4287891) - continued</b>							
EM2206664-002	Anonymous	EP071-EM: >C10 - C40 Fraction (sum)	----	4460 mg/kg	111	70.0	130
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4292359)</b>							
EM2206580-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	96.4	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	73.8	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	93.5	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	104	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	79.8	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	101	59.0	134
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4292359)</b>							
EM2206580-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	91.2	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	100	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	96.8	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	90.8	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	95.1	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	91.0	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	103	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	90.7	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	93.0	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.00125 mg/kg	93.4	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	95.2	69.0	133
		<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4292359)</b>					
EM2206580-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	94.8	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	90.7	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	95.6	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	92.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	95.4	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	116	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	91.5	61.0	139
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4292359)</b>							
EM2206580-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	92.5	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	98.8	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	104	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	117	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: 4292089)</b>							
EM2206725-022	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	# Not Determined	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	113	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	# Not Determined	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	# Not Determined	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	# Not Determined	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	# Not Determined	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4292096)</b>							
EM2206760-004	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	107	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	98.3	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	111	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	89.4	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	90.4	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4292461)</b>							
EM2206562-004	Anonymous	EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.444 µg/L	105	72.0	130
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.47 µg/L	112	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	118	69.0	134
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.465 µg/L	91.3	65.0	140
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.482 µg/L	108	53.0	142
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4292089)</b>							
EM2206725-022	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	# Not Determined	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	96.4	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	# Not Determined	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	98.8	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	97.7	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	95.9	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	83.4	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	79.2	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	77.0	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	86.4	71.0	132



Sub-Matrix: WATER

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery(%) MS	Acceptable Limits (%)	
				Low	High		
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4292096)</b>							
EM2206760-004	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	91.1	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	92.1	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	97.0	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	100	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	95.6	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	98.4	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	96.7	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	87.9	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	96.0	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	114	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	98.4	71.0	132
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4292461)</b>							
EM2206562-004	Anonymous	EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	2.5 µg/L	95.0	73.0	129
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.5 µg/L	93.6	72.0	129
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.5 µg/L	97.1	72.0	129
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.5 µg/L	97.4	72.0	130
		EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.5 µg/L	92.9	71.0	133
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.5 µg/L	95.2	69.0	130
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.5 µg/L	97.4	71.0	129
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.5 µg/L	81.3	69.0	133
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.5 µg/L	94.2	72.0	134
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.5 µg/L	81.9	65.0	144
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	1.25 µg/L	95.5	71.0	132
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4292089)</b>							
EM2206725-022	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	104	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	78.9	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	70.6	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	88.9	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	88.2	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	85.2	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4292096)</b>							
EM2206760-004	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	94.8	67.0	137





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: 4292096) - continued</b>							
EM2206760-004	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	86.9	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	78.4	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	92.5	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	93.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	107	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	111	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4292461)</b>							
EM2206562-004	Anonymous	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.5 µg/L	98.4	67.0	137
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	1.25 µg/L	91.9	68.0	141
		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	96.6	70.0	130
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	1.25 µg/L	100	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.5 µg/L	105	65.0	136
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.5 µg/L	111	61.0	135
		<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4292089)</b>					
EM2206725-022	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	101	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	102	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	111	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	95.2	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4292096)</b>							
EM2206760-004	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	103	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	116	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	101	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	# 60.3	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4292461)</b>							
EM2206562-004	Anonymous	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.469 µg/L	107	63.0	143
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.476 µg/L	115	64.0	140

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 Work Order : EM2206764  
 Client : AGON ENVIRONMENTAL PTY LTD  
 Project : JC0927



Sub-Matrix: **WATER**

				<i>Matrix Spike (MS) Report</i>			
				<i>Spike</i>	<i>SpikeRecovery(%)</i>	<i>Acceptable Limits (%)</i>	
<i>Laboratory sample ID</i>	<i>Sample ID</i>	<i>Method: Compound</i>	<i>CAS Number</i>	<i>Concentration</i>	<i>MS</i>	<i>Low</i>	<i>High</i>
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4292461) - continued</b>							
EM2206562-004	Anonymous	EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.48 µg/L	109	67.0	138
		EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.483 µg/L	84.5	70.0	130

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

Work Order	: <b>EM2206764</b>	Page	: 1 of 13
Client	: <b>AGON ENVIRONMENTAL PTY LTD</b>	Laboratory	: Environmental Division Melbourne
Contact	: Craig Trimbur	Telephone	: +61-3-8549 9600
Project	: JC0927	Date Samples Received	: 13-Apr-2022
Site	: ----	Issue Date	: 21-Apr-2022
Sampler	: Hannah - EP Risk, Louis - EP Risk	No. of samples received	: 20
Order number	: ----	No. of samples analysed	: 20

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

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

### Summary of Outliers

#### Outliers : Quality Control Samples

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

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

#### Outliers : Analysis Holding Time Compliance

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

#### Outliers : Frequency of Quality Control Samples

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



### Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: WATER

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
<b>Matrix Spike (MS) Recoveries</b>							
EP231A: Perfluoroalkyl Sulfonic Acids	EM2206725--022	Anonymous	Perfluorobutane sulfonic acid (PFBS)	375-73-5	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231A: Perfluoroalkyl Sulfonic Acids	EM2206725--022	Anonymous	Perfluorohexane sulfonic acid (PFHxS)	355-46-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231A: Perfluoroalkyl Sulfonic Acids	EM2206725--022	Anonymous	Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231A: Perfluoroalkyl Sulfonic Acids	EM2206725--022	Anonymous	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	EM2206725--022	Anonymous	Perfluorohexanoic acid (PFHxA)	307-24-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2206760--004	Anonymous	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	60.3 %	70.0-130%	Recovery less than lower data quality objective

### Analysis Holding Time Compliance

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

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

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

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

Matrix: SOIL

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

Method	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
<b>Soil Glass Jar - Unpreserved (EA001)</b>								
SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	19-Apr-2022	19-Apr-2022	✓	19-Apr-2022	19-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>EA055: Moisture Content (Dried @ 105-110°C)</b>								
<b>Soil Glass Jar - Unpreserved (EA055)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	----	----	----	16-Apr-2022	26-Apr-2022	✓
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
<b>Soil Glass Jar - Unpreserved (EG005T)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	16-Apr-2022	09-Oct-2022	✓	19-Apr-2022	09-Oct-2022	✓
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
<b>Soil Glass Jar - Unpreserved (EG035T)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	16-Apr-2022	10-May-2022	✓	19-Apr-2022	10-May-2022	✓
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>								
<b>Soil Glass Jar - Unpreserved (EG048G)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	16-Apr-2022	10-May-2022	✓	19-Apr-2022	23-Apr-2022	✓
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
<b>Soil Glass Jar - Unpreserved (EK026SF)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	19-Apr-2022	26-Apr-2022	✓	20-Apr-2022	03-May-2022	✓
<b>EK040T: Fluoride Total</b>								
<b>Soil Glass Jar - Unpreserved (EK040T)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	16-Apr-2022	10-May-2022	✓	21-Apr-2022	10-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>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_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	14-Apr-2022	09-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_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	14-Apr-2022	09-Oct-2022	✓	----	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
<b>Soil Glass Jar - Unpreserved (EP066-EM)</b>								
SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	19-Apr-2022	26-Apr-2022	✓	19-Apr-2022	29-May-2022	✓
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	13-Apr-2022	19-Apr-2022	✓	14-Apr-2022	19-Apr-2022	✓
<b>EP074H: Naphthalene</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	13-Apr-2022	19-Apr-2022	✓	14-Apr-2022	19-Apr-2022	✓
<b>EP074I: Volatile Halogenated Compounds</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	13-Apr-2022	19-Apr-2022	✓	14-Apr-2022	19-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>EP075A: Phenolic Compounds (Halogenated)</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	19-Apr-2022	26-Apr-2022	✓	19-Apr-2022	29-May-2022	✓
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	19-Apr-2022	26-Apr-2022	✓	19-Apr-2022	29-May-2022	✓
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	19-Apr-2022	26-Apr-2022	✓	19-Apr-2022	29-May-2022	✓
<b>EP075I: Organochlorine Pesticides</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	19-Apr-2022	26-Apr-2022	✓	19-Apr-2022	29-May-2022	✓
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	13-Apr-2022	19-Apr-2022	✓	14-Apr-2022	19-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	19-Apr-2022	26-Apr-2022	✓	19-Apr-2022	29-May-2022	✓



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	13-Apr-2022	19-Apr-2022	✓	14-Apr-2022	19-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b>								
SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	19-Apr-2022	26-Apr-2022	✓	19-Apr-2022	29-May-2022	✓
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	20-Apr-2022	09-Oct-2022	✓	20-Apr-2022	30-May-2022	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	20-Apr-2022	09-Oct-2022	✓	20-Apr-2022	30-May-2022	✓
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	20-Apr-2022	09-Oct-2022	✓	20-Apr-2022	30-May-2022	✓
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	20-Apr-2022	09-Oct-2022	✓	20-Apr-2022	30-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>EP231P: PFAS Sums</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	12-Apr-2022	20-Apr-2022	09-Oct-2022	✓	20-Apr-2022	30-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	
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_OB_20220412_09_23_SR_Rinsate_ALS,	SX_OB_20220412_09_28_SB_Blank_ALS	13-Apr-2022	19-Apr-2022	10-Oct-2022	✓	19-Apr-2022	10-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS, SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS, SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	14-Apr-2022	19-Apr-2022	11-Oct-2022	✓	19-Apr-2022	11-Oct-2022	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>HDPE (no PTFE) (EP231X-INJ)</b> SX_OB_20220412_09_23_SR_Rinsate_ALS,	SX_OB_20220412_09_28_SB_Blank_ALS	13-Apr-2022	19-Apr-2022	10-Oct-2022	✓	19-Apr-2022	10-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220413_04_01_SS_Primary_ALS, SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	SX_OB_20220412_07_44_SS_Duplicate_ALS, SX_OB_20220412_17_19_SS_Triplicate_ALS, SX_OB_20220412_17_27_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS, SX_OB_20220412_07_43_SS_Primary_ALS, SX_OB_20220412_07_55_SS_Primary_ALS, SX_OB_20220412_17_22_SS_Primary_ALS, SX_OB_20220412_20_04_SS_Primary_ALS, SX_OB_20220412_23_59_SS_Primary_ALS,	14-Apr-2022	19-Apr-2022	11-Oct-2022	✓	19-Apr-2022	11-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>EP231C: Perfluoroalkyl Sulfonamides</b>									
<b>HDPE (no PTFE) (EP231X-INJ)</b>									
SX_OB_20220412_09_23_SR_Rinsate_ALS,	SX_OB_20220412_09_28_SB_Blank_ALS	13-Apr-2022	19-Apr-2022	10-Oct-2022	✓	19-Apr-2022	10-Oct-2022	✓	
<b>HDPE (no PTFE) (EP231X)</b>									
SX_OB_20220412_07_43_SS_Primary_ALS,	SX_OB_20220412_07_44_SS_Duplicate_ALS,	14-Apr-2022	19-Apr-2022	11-Oct-2022	✓	19-Apr-2022	11-Oct-2022	✓	
SX_OB_20220412_07_55_SS_Primary_ALS,	SX_OB_20220412_17_19_SS_Triplicate_ALS,								
SX_OB_20220412_17_22_SS_Primary_ALS,	SX_OB_20220412_17_27_SS_Primary_ALS,								
SX_OB_20220412_20_04_SS_Primary_ALS,	SX_OB_20220412_23_59_SS_Primary_ALS,								
SX_OB_20220413_04_01_SS_Primary_ALS,	SX_OB_20220412_07_43_SS_Primary_ALS,								
SX_OB_20220412_07_44_SS_Duplicate_ALS,	SX_OB_20220412_07_55_SS_Primary_ALS,								
SX_OB_20220412_17_19_SS_Triplicate_ALS,	SX_OB_20220412_17_22_SS_Primary_ALS,								
SX_OB_20220412_17_27_SS_Primary_ALS,	SX_OB_20220412_20_04_SS_Primary_ALS,								
SX_OB_20220412_23_59_SS_Primary_ALS,	SX_OB_20220412_20_04_SS_Primary_ALS								
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>									
<b>HDPE (no PTFE) (EP231X-INJ)</b>									
SX_OB_20220412_09_23_SR_Rinsate_ALS,	SX_OB_20220412_09_28_SB_Blank_ALS	13-Apr-2022	19-Apr-2022	10-Oct-2022	✓	19-Apr-2022	10-Oct-2022	✓	
<b>HDPE (no PTFE) (EP231X)</b>									
SX_OB_20220412_07_43_SS_Primary_ALS,	SX_OB_20220412_07_44_SS_Duplicate_ALS,	14-Apr-2022	19-Apr-2022	11-Oct-2022	✓	19-Apr-2022	11-Oct-2022	✓	
SX_OB_20220412_07_55_SS_Primary_ALS,	SX_OB_20220412_17_19_SS_Triplicate_ALS,								
SX_OB_20220412_17_22_SS_Primary_ALS,	SX_OB_20220412_17_27_SS_Primary_ALS,								
SX_OB_20220412_20_04_SS_Primary_ALS,	SX_OB_20220412_23_59_SS_Primary_ALS,								
SX_OB_20220413_04_01_SS_Primary_ALS,	SX_OB_20220412_07_43_SS_Primary_ALS,								
SX_OB_20220412_07_44_SS_Duplicate_ALS,	SX_OB_20220412_07_55_SS_Primary_ALS,								
SX_OB_20220412_17_19_SS_Triplicate_ALS,	SX_OB_20220412_17_22_SS_Primary_ALS,								
SX_OB_20220412_17_27_SS_Primary_ALS,	SX_OB_20220412_20_04_SS_Primary_ALS,								
SX_OB_20220412_23_59_SS_Primary_ALS,	SX_OB_20220412_20_04_SS_Primary_ALS								
<b>EP231P: PFAS Sums</b>									
<b>HDPE (no PTFE) (EP231X-INJ)</b>									
SX_OB_20220412_09_23_SR_Rinsate_ALS,	SX_OB_20220412_09_28_SB_Blank_ALS	13-Apr-2022	19-Apr-2022	10-Oct-2022	✓	19-Apr-2022	10-Oct-2022	✓	
<b>HDPE (no PTFE) (EP231X)</b>									
SX_OB_20220412_07_43_SS_Primary_ALS,	SX_OB_20220412_07_44_SS_Duplicate_ALS,	14-Apr-2022	19-Apr-2022	11-Oct-2022	✓	19-Apr-2022	11-Oct-2022	✓	
SX_OB_20220412_07_55_SS_Primary_ALS,	SX_OB_20220412_17_19_SS_Triplicate_ALS,								
SX_OB_20220412_17_22_SS_Primary_ALS,	SX_OB_20220412_17_27_SS_Primary_ALS,								
SX_OB_20220412_20_04_SS_Primary_ALS,	SX_OB_20220412_23_59_SS_Primary_ALS,								
SX_OB_20220413_04_01_SS_Primary_ALS,	SX_OB_20220412_07_43_SS_Primary_ALS,								
SX_OB_20220412_07_44_SS_Duplicate_ALS,	SX_OB_20220412_07_55_SS_Primary_ALS,								
SX_OB_20220412_17_19_SS_Triplicate_ALS,	SX_OB_20220412_17_22_SS_Primary_ALS,								
SX_OB_20220412_17_27_SS_Primary_ALS,	SX_OB_20220412_20_04_SS_Primary_ALS,								
SX_OB_20220412_23_59_SS_Primary_ALS,	SX_OB_20220412_20_04_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	Reaular	Actual	Expected	Evaluation	
<b>Laboratory Duplicates (DUP)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	4	37	10.81	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	1	9	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	3	27	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	36	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	9	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	4	37	10.81	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	27	7.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
Deionised Water Leach - Plastic Leaching Vessel	EN60-DIa-P	2	25	8.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	37	5.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	27	7.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard



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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
<b>Analytical Methods</b>							
<b>Matrix Spikes (MS)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	4	37	10.81	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	27	7.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard

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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	35	11.43	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	7	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	35	5.71	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	35	5.71	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	35	5.71	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard



## Brief Method Summaries

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

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



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

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



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

# CHAIN OF CUSTODY DOCUMENTATION



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 ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)  
 motherhublabresults1@wgtp.com.au

ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles	CONTAINER INFORMATION		Spoil Sample Prep	P16 plus Cr	PFAS 28 Extended suite	ASLP PFAS - Extended Suite (Lab to determine pH)	DI Leachate PFAS - Extended Suite	Notes:
							Matrix	Volume						
1	SX_OB_20220413_12_52_SS_Primary_ALS	Soil	13.04.2022	12:52	Bucket	1								
2	SX_OB_20220413_08_29_SS_Primary_ALS	Soil	13.04.2022	8:29	Bucket	1								
3	SX_OB_20220413_16_24_SS_Primary_ALS	Soil	13.04.2022	16:24	Bucket	1								
4	SX_OB_20220413_16_10_SS_Primary_ALS	Soil	13.04.2022	16:10	Bucket	1								
5	SX_OB_20220413_08_15_SS_Primary_ALS	Soil	13.04.2022	8:15	Bucket	1								
6	SX_OB_20220413_16_22_SS_Triplicate_ALS	Soil	13.04.2022	16:22	Bucket	1								
7	SX_OB_20220413_08_17_SS_Duplicate_ALS	Soil	13.04.2022	8:17	Bucket	1								
8	SX_OB_20220413_16_48_SR_RinseAL ALS	Water	13.04.2022	16:48	Bottle	1								
9	SX_OB_20220413_16_49_SB_Blank_ALS	Water	13.04.2022	16:49	Bottle	1								
10	SX_OB_20220413_20_16_SS_Primary_ALS	Soil	13.04.2022	20:17	Bucket	1								
11	SX_OB_20220414_00_02_SS_Primary_ALS	Soil	14.04.2022	00:02	Bucket	1								
12	SX_OB_20220414_03_53_SS_Primary_ALS	Soil	14.04.2022	3:53	Bucket	1								

RELINQUISHED BY: *Will O'Haire* RECEIVED BY: *Will O'Haire*  
 Date: 14/04/2022 Date: 14/04/2022  
 Time: AM Time: AM

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

Environmental Division  
 Melbourne  
 Work Order Reference  
**EM2206896**  
 Telephone: +61-3-8549 9600

## AUSTRALIAN LABORATORY SERVICES P/L



### CHAIN OF CUSTODY DOCUMENTATION



Australian Laboratory Services Pty Ltd

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

SAMPLER: Luke D. EP RiskDavid  
 LAWSON/WILL O'HAIRE  
 MOBILE 1: +61 400 826 907 (Craig Trimbur)  
 MOBILE 2: +61 490 411 004 (David Lawson)

EMAIL REPORT TO: Labreports.TST@agonenviro.com.au agonenvironmental@esdat.com.au  
 motherhublabresults1@wqpd.com.au

SITE: 20220414041718-ALS-8

P.O. NO.:

RESULTS REQUIRED (Date): 5 days

QUOTE NO.: ME-150-19 WGTP

EMAIL INVOICE TO: (if different to report)

Labreports.TST@agonenviro.com.au agonenvironmental@esdat.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

CONTAINER INFORMATION

ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles	Spill Sample Prep	P16 plus Cr	PFAS 28 Extended suite	ASLP PFAS - Extended Suite (Lab to determine pH)	DI Leachate PFAS - Extended Suite	Notes:
1	SX_OB_20220413_12_52_SS_Primary_ALS	Soil	13.04.2022	12:52	Bucket	1	X	X	X	X	X	
2	SX_OB_20220413_08_29_SS_Primary_ALS	Soil	13.04.2022	8:29	Bucket	1	X	X	X	X	X	
3	SX_OB_20220413_16_24_SS_Primary_ALS	Soil	13.04.2022	16:24	Bucket	1	X	X	X	X	X	
4	SX_OB_20220413_16_10_SS_Primary_ALS	Soil	13.04.2022	16:10	Bucket	1	X	X	X	X	X	
5	SX_OB_20220413_08_15_SS_Primary_ALS	Soil	13.04.2022	8:15	Bucket	1	X	X	X	X	X	
6	SX_OB_20220413_16_22_SS_Triplicate_ALS	Soil	13.04.2022	16:22	Bucket	1	X	X	X	X	X	
7	SX_OB_20220413_08_17_SS_Duplicate_ALS	Soil	13.04.2022	8:17	Bucket	1	X	X	X	X	X	
8	SX_OB_20220413_16_48_SR_Rinse_ALS	Water	13.04.2022	16:48	Bottle	1		X				
9	SX_OB_20220413_16_48_SB_Blank_ALS	Water	13.04.2022	16:49	Bottle	1		X				
10	SX_OB_20220413_20_16_SS_Primary_ALS	Soil	13.04.2022	20:17	Bucket	1	X	X	X	X	X	
11	SX_OB_20220414_00_02_SS_Primary_ALS	Soil	14.04.2022	00:02	Bucket	1	X	X	X	X	X	
12	SX_OB_20220414_03_53_SS_Primary_ALS	Soil	14.04.2022	3:53	Bucket	1	X	X	X	X	X	

RELINQUISHED BY:

RECEIVED BY:

Name: Will O'Haire Date: 14/04/2022

Name: *Worm*

Of: Agon Environmental Time: AM

Name: *Worm*

Name: Date: Time:

Name: *Worm*

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

Environmental Division  
 Melbourne  
 Work Order Reference  
**EM2206896**

Te-af, home : + 61-3-8519 9600

## CERTIFICATE OF ANALYSIS

<b>Work Order</b>	<b>: EM2206896</b>	<b>Page</b>	: 1 of 29
<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>	: 14-Apr-2022 10:20
<b>Order number</b>	: ----	<b>Date Analysis Commenced</b>	: 14-Apr-2022
<b>C-O-C number</b>	: 20220414041718-ALS-8	<b>Issue Date</b>	: 26-Apr-2022 22:08
<b>Sampler</b>	: ----		
<b>Site</b>	: 20220414041718-ALS-8		
<b>Quote number</b>	: EN/150/19 -WGTP -Bulk Sample Quote		
<b>No. of samples received</b>	: 22		
<b>No. of samples analysed</b>	: 22		



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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

### Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
Jarwis Nheu	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC



## General Comments

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

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP074-UT: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074-WF: Where reported, Sum of trichlorobenzenes is the sum of the reported concentrations of 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene, and 1,3,5-Trichlorobenzene at or above the LOR.
- EP231X: Poor matrix spike recovery for sample EM2206896-013 due to sample matrix interference.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, 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_20220413_12_52_SS_Primary_ALS	SX_OB_20220413_08_29_SS_Primary_ALS	SX_OB_20220413_16_24_SS_Primary_ALS	SX_OB_20220413_16_10_SS_Primary_ALS	SX_OB_20220413_08_15_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-001	EM2206896-002	EM2206896-003	EM2206896-004	EM2206896-005
				Result	Result	Result	Result	Result
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	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_20220413_12_52_SS_Primary_ALS	SX_OB_20220413_08_29_SS_Primary_ALS	SX_OB_20220413_16_24_SS_Primary_ALS	SX_OB_20220413_16_10_SS_Primary_ALS	SX_OB_20220413_08_15_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-001	EM2206896-002	EM2206896-003	EM2206896-004	EM2206896-005
				Result	Result	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	<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	%	105	121	109	107	115
13C8-PFOA	----	0.02	%	100	104	103	101	101



## Analytical Results

Sub-Matrix: ASLP LEACHATE  
 (Matrix: WATER)

Sample ID

				SX_OB_20220413_16 _22_SS_Triplicate_AL S	SX_OB_20220413_08 _17_SS_Duplicate_AL S	SX_OB_20220413_20 _16_SS_Primary_ALS	SX_OB_20220414_00 _02_SS_Primary_ALS	SX_OB_20220414_03 _53_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-006	EM2206896-007	EM2206896-010	EM2206896-011	EM2206896-012
				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_20220413_16 _22_SS_Triplicate_AL S	SX_OB_20220413_08 _17_SS_Duplicate_AL S	SX_OB_20220413_20 _16_SS_Primary_ALS	SX_OB_20220414_00 _02_SS_Primary_ALS	SX_OB_20220414_03 _53_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-006	EM2206896-007	EM2206896-010	EM2206896-011	EM2206896-012
				Result	Result	Result	Result	Result
<b>EP231C: Perfluoroalkyl Sulfonamides - Continued</b>								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231P: PFAS Sums</b>								
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.02	%	96.4	106	107	104	97.6
13C8-PFOA	----	0.02	%	99.9	103	103	101	102



## Analytical Results

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

Sample ID

				SX_OB_20220413_12_52_SS_Primary_ALS_DI	SX_OB_20220413_08_29_SS_Primary_ALS_DI	SX_OB_20220413_16_24_SS_Primary_ALS_DI	SX_OB_20220413_16_10_SS_Primary_ALS_DI	SX_OB_20220413_08_15_SS_Primary_ALS_DI
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-013	EM2206896-014	EM2206896-015	EM2206896-016	EM2206896-017
				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_20220413_12 _52_SS_Primary_ALS DI	SX_OB_20220413_08 _29_SS_Primary_ALS DI	SX_OB_20220413_16 _24_SS_Primary_ALS DI	SX_OB_20220413_16 _10_SS_Primary_ALS DI	SX_OB_20220413_08 _15_SS_Primary_ALS DI
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-013	EM2206896-014	EM2206896-015	EM2206896-016	EM2206896-017
				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	%	119	128	134	125	112
13C8-PFOA	----	0.02	%	99.1	99.0	101	97.0	104



## Analytical Results

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

Sample ID

				SX_OB_20220413_16 _22_SS_Triplicate_AL S DI	SX_OB_20220413_08 _17_SS_Duplicate_AL S DI	SX_OB_20220413_20 _16_SS_Primary_ALS DI	SX_OB_20220414_00 _02_SS_Primary_ALS DI	SX_OB_20220414_03 _53_SS_Primary_ALS DI
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-018 Result	EM2206896-019 Result	EM2206896-020 Result	EM2206896-021 Result	EM2206896-022 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_20220413_16 _22_SS_Triplicate_AL S DI	SX_OB_20220413_08 _17_SS_Duplicate_AL S DI	SX_OB_20220413_20 _16_SS_Primary_ALS DI	SX_OB_20220414_00 _02_SS_Primary_ALS DI	SX_OB_20220414_03 _53_SS_Primary_ALS DI
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-018	EM2206896-019	EM2206896-020	EM2206896-021	EM2206896-022
				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	%	127	121	125	123	123
13C8-PFOA	----	0.02	%	101	101	100	104	98.0



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID				
				SX_OB_20220413_12_52_SS_Primary_ALS	SX_OB_20220413_08_29_SS_Primary_ALS	SX_OB_20220413_16_24_SS_Primary_ALS	SX_OB_20220413_16_10_SS_Primary_ALS	SX_OB_20220413_08_15_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-001	EM2206896-002	EM2206896-003	EM2206896-004	EM2206896-005
				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	7.7	7.7	7.8	7.7
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	29.0	31.4	32.4	31.3	30.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	40	29	25	35	30
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	5	mg/kg	94	71	69	95	86
Copper	7440-50-8	5	mg/kg	45	48	45	48	43
Lead	7439-92-1	5	mg/kg	<5	<5	6	<5	<5
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	<5	<5
Nickel	7440-02-0	5	mg/kg	167	150	147	150	138
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	74	82	85	88	80
<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	1.1	<1.0	<1.0	<1.0	<1.0
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
Total Cyanide	57-12-5	5	mg/kg	<5	<5	<5	<5	<5
<b>EK040T: Fluoride Total</b>								
Fluoride	16984-48-8	100	mg/kg	<100	<100	<100	<100	<100
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Initial pH	----	0.1	pH Unit	7.1	7.2	7.3	7.7	9.4
After HCl pH	----	0.1	pH Unit	1.1	1.0	1.0	1.0	1.0
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	5.0	5.0
Final pH	----	0.1	pH Unit	5.0	5.1	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



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220413_12_52_SS_Primary_ALS	SX_OB_20220413_08_29_SS_Primary_ALS	SX_OB_20220413_16_24_SS_Primary_ALS	SX_OB_20220413_16_10_SS_Primary_ALS	SX_OB_20220413_08_15_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-001	EM2206896-002	EM2206896-003	EM2206896-004	EM2206896-005
				Result	Result	Result	Result	Result
<b>EP074A: Monocyclic Aromatic Hydrocarbons - Continued</b>								
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
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
<sup>^</sup> Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
<sup>^</sup> 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
1,1,1,2,2-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
<sup>^</sup> Sum of volatile chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
<sup>^</sup> 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_20220413_12_52_SS_Primary_ALS	SX_OB_20220413_08_29_SS_Primary_ALS	SX_OB_20220413_16_24_SS_Primary_ALS	SX_OB_20220413_16_10_SS_Primary_ALS	SX_OB_20220413_08_15_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-001	EM2206896-002	EM2206896-003	EM2206896-004	EM2206896-005
				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
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



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220413_12_52_SS_Primary_ALS	SX_OB_20220413_08_29_SS_Primary_ALS	SX_OB_20220413_16_24_SS_Primary_ALS	SX_OB_20220413_16_10_SS_Primary_ALS	SX_OB_20220413_08_15_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-001	EM2206896-002	EM2206896-003	EM2206896-004	EM2206896-005
				Result	Result	Result	Result	Result
<b>EP075B: Polynuclear Aromatic Hydrocarbons - Continued</b>								
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
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-29-3	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



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_OB_20220413_12_52_SS_Primary_ALS	SX_OB_20220413_08_29_SS_Primary_ALS	SX_OB_20220413_16_24_SS_Primary_ALS	SX_OB_20220413_16_10_SS_Primary_ALS	SX_OB_20220413_08_15_SS_Primary_ALS	
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00		
Compound	CAS Number	LOR	Unit	EM2206896-001	EM2206896-002	EM2206896-003	EM2206896-004	EM2206896-005		
				Result	Result	Result	Result	Result		
<b>EP075I: Organochlorine Pesticides - Continued</b>										
^ Sum of other organochlorine pesticides				----	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
C6 - C9 Fraction				----	20	mg/kg	<20	<20	<20	<20
C10 - C14 Fraction				----	50	mg/kg	<50	<50	<50	<50
C6 - C10 Fraction				C6_C10	20	mg/kg	<20	<20	<20	<20
C15 - C28 Fraction				----	100	mg/kg	<100	<100	<100	<100
C29 - C36 Fraction				----	100	mg/kg	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)				----	50	mg/kg	<50	<50	<50	<50
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>										
>C10 - C16 Fraction				----	50	mg/kg	<50	<50	<50	<50
>C16 - C34 Fraction				----	100	mg/kg	<100	<100	<100	<100
>C34 - C40 Fraction				----	100	mg/kg	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)				----	50	mg/kg	<50	<50	<50	<50
>C10 - C16 Fraction minus Naphthalene (F2)				----	50	mg/kg	<50	<50	<50	<50
C6 - C10 Fraction minus BTEX (F1)				C6_C10-BTEX	20	mg/kg	<20	<20	<20	<20
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>										
Perfluorobutane sulfonic acid (PFBS)				375-73-5	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
Perfluoropentane sulfonic acid (PFPeS)				2706-91-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
Perfluorohexane sulfonic acid (PFHxS)				355-46-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
Perfluoroheptane sulfonic acid (PFHpS)				375-92-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
Perfluorooctane sulfonic acid (PFOS)				1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
Perfluorodecane sulfonic acid (PFDS)				335-77-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>										
Perfluorobutanoic acid (PFBA)				375-22-4	5	µg/kg	<5	<5	<5	<5
Perfluoropentanoic acid (PFPeA)				2706-90-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
Perfluorohexanoic acid (PFHxA)				307-24-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
Perfluoroheptanoic acid (PFHpA)				375-85-9	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_OB_20220413_12_52_SS_Primary_ALS	SX_OB_20220413_08_29_SS_Primary_ALS	SX_OB_20220413_16_24_SS_Primary_ALS	SX_OB_20220413_16_10_SS_Primary_ALS	SX_OB_20220413_08_15_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	
Compound	CAS Number	LOR	Unit	EM2206896-001	EM2206896-002	EM2206896-003	EM2206896-004	EM2206896-005	
				Result	Result	Result	Result	Result	
<b>EP231B: Perfluoroalkyl Carboxylic Acids - Continued</b>									
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>									
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	



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_OB_20220413_12 _52_SS_Primary_ALS	SX_OB_20220413_08 _29_SS_Primary_ALS	SX_OB_20220413_16 _24_SS_Primary_ALS	SX_OB_20220413_16 _10_SS_Primary_ALS	SX_OB_20220413_08 _15_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	
Compound	CAS Number	LOR	Unit	EM2206896-001	EM2206896-002	EM2206896-003	EM2206896-004	EM2206896-005	
				Result	Result	Result	Result	Result	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued</b>									
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	%	110	109	98.3	103	108	
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	86.6	78.7	90.2	79.3	81.8	
Toluene-D8	2037-26-5	0.1	%	82.8	72.2	87.9	73.2	77.1	
4-Bromofluorobenzene	460-00-4	0.1	%	94.5	79.6	92.0	77.9	81.0	
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>									
Phenol-d6	13127-88-3	0.025	%	92.8	85.7	77.4	82.7	85.1	
2-Chlorophenol-D4	93951-73-6	0.025	%	85.5	81.4	74.4	78.2	80.2	
2,4,6-Tribromophenol	118-79-6	0.025	%	76.2	67.2	75.6	70.0	71.5	
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>									
Nitrobenzene-D5	4165-60-0	0.025	%	95.8	97.5	89.6	88.7	86.2	
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	82.9	88.7	76.0	79.1	80.0	
2-Fluorobiphenyl	321-60-8	0.025	%	92.9	95.2	76.0	86.8	89.4	
Anthracene-d10	1719-06-8	0.025	%	91.3	93.1	86.6	86.1	88.2	
4-Terphenyl-d14	1718-51-0	0.025	%	94.4	104	85.3	89.2	90.9	
<b>EP231S: PFAS Surrogate</b>									
13C4-PFOS	----	0.0002	%	128	127	134	132	131	
13C8-PFOA	----	0.0002	%	106	98.0	107	105	102	



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220413_16 _22_SS_Triplicate_AL S	SX_OB_20220413_08 _17_SS_Duplicate_AL S	SX_OB_20220413_20 _16_SS_Primary_ALS	SX_OB_20220414_00 _02_SS_Primary_ALS	SX_OB_20220414_03 _53_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-006	EM2206896-007	EM2206896-010	EM2206896-011	EM2206896-012
				Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
pH (CaCl2)	----	0.1	pH Unit	7.8	7.7	7.9	7.8	7.8
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	29.2	30.1	32.4	32.2	30.2
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	30	39	26	25	32
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	5	mg/kg	78	68	82	78	87
Copper	7440-50-8	5	mg/kg	42	46	54	40	38
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	<5	<5
Nickel	7440-02-0	5	mg/kg	132	174	161	150	117
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	77	102	95	74	70
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>								
Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	<1.0	1.1	<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	<100	<100	100	<100	<100
<b>EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Initial pH	----	0.1	pH Unit	9.2	8.9	8.6	9.1	9.3
After HCl pH	----	0.1	pH Unit	1.0	1.0	1.0	1.0	7.3
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	5.0	2.9
Final pH	----	0.1	pH Unit	5.0	5.0	5.0	5.0	3.6
<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_20220413_16 _22_SS_Triplicate_AL S	SX_OB_20220413_08 _17_SS_Duplicate_AL S	SX_OB_20220413_20 _16_SS_Primary_ALS	SX_OB_20220414_00 _02_SS_Primary_ALS	SX_OB_20220414_03 _53_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-006	EM2206896-007	EM2206896-010	EM2206896-011	EM2206896-012
				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	<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_20220413_16 _22_SS_Triplicate_AL S	SX_OB_20220413_08 _17_SS_Duplicate_AL S	SX_OB_20220413_20 _16_SS_Primary_ALS	SX_OB_20220414_00 _02_SS_Primary_ALS	SX_OB_20220414_03 _53_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-006	EM2206896-007	EM2206896-010	EM2206896-011	EM2206896-012
				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	<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_20220413_16 _22_SS_Triplicate_AL S	SX_OB_20220413_08 _17_SS_Duplicate_AL S	SX_OB_20220413_20 _16_SS_Primary_ALS	SX_OB_20220414_00 _02_SS_Primary_ALS	SX_OB_20220414_03 _53_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-006	EM2206896-007	EM2206896-010	EM2206896-011	EM2206896-012
				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	<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

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Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-006	EM2206896-007	EM2206896-010	EM2206896-011	EM2206896-012
				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	<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

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 (Matrix: SOIL)

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Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-006	EM2206896-007	EM2206896-010	EM2206896-011	EM2206896-012
				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_20220413_16 _22_SS_Triplicate_AL S	SX_OB_20220413_08 _17_SS_Duplicate_AL S	SX_OB_20220413_20 _16_SS_Primary_ALS	SX_OB_20220414_00 _02_SS_Primary_ALS	SX_OB_20220414_03 _53_SS_Primary_ALS
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-006	EM2206896-007	EM2206896-010	EM2206896-011	EM2206896-012
				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	<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	%	111	88.6	111	89.5	102
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	79.1	89.8	82.4	85.2	88.2
Toluene-D8	2037-26-5	0.1	%	77.2	86.0	76.4	83.1	87.0
4-Bromofluorobenzene	460-00-4	0.1	%	80.0	88.3	80.0	84.6	90.2
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>								
Phenol-d6	13127-88-3	0.025	%	91.9	76.4	91.4	68.1	78.3
2-Chlorophenol-D4	93951-73-6	0.025	%	88.2	72.7	85.6	66.0	74.0
2,4,6-Tribromophenol	118-79-6	0.025	%	78.8	73.7	84.5	65.3	71.6
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>								
Nitrobenzene-D5	4165-60-0	0.025	%	94.9	76.6	108	73.6	76.6
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	87.2	73.3	85.3	64.9	74.7
2-Fluorobiphenyl	321-60-8	0.025	%	97.4	81.2	95.1	72.8	84.0
Anthracene-d10	1719-06-8	0.025	%	96.0	81.4	88.2	72.9	82.8
4-Terphenyl-d14	1718-51-0	0.025	%	100	86.2	95.4	73.4	84.9
<b>EP231S: PFAS Surrogate</b>								
13C4-PFOS	----	0.0002	%	117	133	133	125	126
13C8-PFOA	----	0.0002	%	100.0	106	108	110	102



**Analytical Results**

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220413_12 _52_SS_Primary_ALS DI	SX_OB_20220413_08 _29_SS_Primary_ALS DI	SX_OB_20220413_16 _24_SS_Primary_ALS DI	SX_OB_20220413_16 _10_SS_Primary_ALS DI	SX_OB_20220413_08 _15_SS_Primary_ALS DI
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-013	EM2206896-014	EM2206896-015	EM2206896-016	EM2206896-017
				Result	Result	Result	Result	Result
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Final pH	----	0.1	pH Unit	9.4	9.5	9.5	9.5	9.4



**Analytical Results**

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				SX_OB_20220413_16 _22_SS_Triplicate_AL S DI	SX_OB_20220413_08 _17_SS_Duplicate_AL S DI	SX_OB_20220413_20 _16_SS_Primary_ALS DI	SX_OB_20220414_00 _02_SS_Primary_ALS DI	SX_OB_20220414_03 _53_SS_Primary_ALS DI
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00	14-Apr-2022 00:00
Compound	CAS Number	LOR	Unit	EM2206896-018	EM2206896-019	EM2206896-020	EM2206896-021	EM2206896-022
				Result	Result	Result	Result	Result
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)</b>								
Final pH	----	0.1	pH Unit	9.7	9.5	9.5	9.5	9.8



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID		SX_OB_20220413_16 _48_SR_Rinsate_ALS	SX_OB_20220413_16 _49_SB_Blank_ALS	----	----	----
Sampling date / time			14-Apr-2022 00:00		14-Apr-2022 00:00		----	----	----
Compound	CAS Number	LOR	Unit	EM2206896-008	EM2206896-009	-----	-----	-----	
				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 (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----	
<b>EP231C: Perfluoroalkyl Sulfonamides</b>									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----	



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SX_OB_20220413_16 _48_SR_Rinsate_ALS	SX_OB_20220413_16 _49_SB_Blank_ALS	----	----	----
Sampling date / time				14-Apr-2022 00:00	14-Apr-2022 00:00	----	----	----	
Compound	CAS Number	LOR	Unit	EM2206896-008	EM2206896-009	-----	-----	-----	
				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	%	93.0	95.7	----	----	----	
13C8-PFOA	----	0.02	%	98.9	99.9	----	----	----	



## 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

## Automated Guideline Comparison Report

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

<b>Work Order</b>	: <b>EM2206896</b>	Page	: 1 of 27
Client	: <b>AGON ENVIRONMENTAL PTY LTD</b>	Laboratory	: Environmental Division Melbourne
Contact	: Craig Trimbur		
Address	: D1.1 63-85 TURNER STREET PORT MELBOURNE 3207	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: Craig.Trimbur@eprisk.com.au	E-mail	: Josh.Alexander@alsglobal.com
Telephone	: ----	Telephone	: +61-3-8549 9600
Facsimile	: ----	Facsimile	: +61-3-8549 9626
Project	: JC0927	Date Received	: 14-Apr-2022 10:20
Order number	: ----	Date Analysed	: 14-Apr-2022
C-O-C number	: 20220414041718-ALS-8	Date Issued	: 26-Apr-2022 22:07
No. of samples received	: 22		
No. of samples analysed	: 22	Quote number	: EN/150/19 -WGTP -Bulk Sample Quote

#### **General Comments**

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

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

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

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

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



## Summary of Thresholds Reached or Exceeded

EPA Victoria Publication IWRG 621 (2009)

Table 2: Soil Hazard Categorisation Thresholds : Fill Material

Client Sample ID	ALS Sample ID	Compound	Method	LOR	Limits	Result
SX_OB_20220413_12_52 SS_Primary_ALS	EM2206896-001	Arsenic	EG005T	5	< 20 mg/kg	40 mg/kg
SX_OB_20220413_12_52 SS_Primary_ALS	EM2206896-001	Nickel	EG005T	5	< 60 mg/kg	167 mg/kg
SX_OB_20220413_12_52 SS_Primary_ALS	EM2206896-001	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	1.1 mg/kg
SX_OB_20220413_08_29 SS_Primary_ALS	EM2206896-002	Arsenic	EG005T	5	< 20 mg/kg	29 mg/kg
SX_OB_20220413_08_29 SS_Primary_ALS	EM2206896-002	Nickel	EG005T	5	< 60 mg/kg	150 mg/kg
SX_OB_20220413_16_24 SS_Primary_ALS	EM2206896-003	Arsenic	EG005T	5	< 20 mg/kg	25 mg/kg
SX_OB_20220413_16_24 SS_Primary_ALS	EM2206896-003	Nickel	EG005T	5	< 60 mg/kg	147 mg/kg
SX_OB_20220413_16_10 SS_Primary_ALS	EM2206896-004	Arsenic	EG005T	5	< 20 mg/kg	35 mg/kg
SX_OB_20220413_16_10 SS_Primary_ALS	EM2206896-004	Nickel	EG005T	5	< 60 mg/kg	150 mg/kg
SX_OB_20220413_08_15 SS_Primary_ALS	EM2206896-005	Arsenic	EG005T	5	< 20 mg/kg	30 mg/kg
SX_OB_20220413_08_15 SS_Primary_ALS	EM2206896-005	Nickel	EG005T	5	< 60 mg/kg	138 mg/kg
SX_OB_20220413_16_22 SS_Triplicate_ALS	EM2206896-006	Arsenic	EG005T	5	< 20 mg/kg	30 mg/kg
SX_OB_20220413_16_22 SS_Triplicate_ALS	EM2206896-006	Nickel	EG005T	5	< 60 mg/kg	132 mg/kg
SX_OB_20220413_08_17 SS_Duplicate_ALS	EM2206896-007	Arsenic	EG005T	5	< 20 mg/kg	39 mg/kg
SX_OB_20220413_08_17 SS_Duplicate_ALS	EM2206896-007	Nickel	EG005T	5	< 60 mg/kg	174 mg/kg
SX_OB_20220413_20_16 SS_Primary_ALS	EM2206896-010	Arsenic	EG005T	5	< 20 mg/kg	26 mg/kg
SX_OB_20220413_20_16 SS_Primary_ALS	EM2206896-010	Nickel	EG005T	5	< 60 mg/kg	161 mg/kg
SX_OB_20220414_00_02 SS_Primary_ALS	EM2206896-011	Arsenic	EG005T	5	< 20 mg/kg	25 mg/kg
SX_OB_20220414_00_02 SS_Primary_ALS	EM2206896-011	Nickel	EG005T	5	< 60 mg/kg	150 mg/kg





**EPA Victoria Publication IWRG 621 (2009)**

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

Client Sample ID	ALS Sample ID	Compound	Method	LOR	Limits	Result
SX_OB_20220414_00_02 SS_Primary_ALS	EM2206896-011	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	1.1 mg/kg
SX_OB_20220414_03_53 SS_Primary_ALS	EM2206896-012	Arsenic	EG005T	5	< 20 mg/kg	32 mg/kg
SX_OB_20220414_03_53 SS_Primary_ALS	EM2206896-012	Nickel	EG005T	5	< 60 mg/kg	117 mg/kg



## Analytical Results

### Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 413_12_52_S S_Primary_AL S	SX_OB_20220 413_08_29_S S_Primary_AL S	SX_OB_20220 413_16_24_S S_Primary_AL S	SX_OB_20220 413_16_10_S S_Primary_AL S	SX_OB_20220 413_08_15_S S_Primary_AL S	
				Sampling date/time	Guideline						Guideline
				Lower Limit	Upper Limit						
						14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	
						EM2206896-001 MU	EM2206896-002 MU	EM2206896-003 MU	EM2206896-004 MU	EM2206896-005 MU	
<b>EA001: pH in soil using 0.01M CaCl extract</b>											
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5	7.8 ±0.1	7.7 ±0.1	7.7 ±0.1	7.8 ±0.1	7.7 ±0.1	
<b>EG005(ED093)T: Total Metals by ICP-AES</b>											
Arsenic	EG005T	5	mg/kg	----	2000	40 ±5	29 ±4	25 ±4	35 ±5	30 ±4	
Cadmium	EG005T	1	mg/kg	----	400	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..	
Copper	EG005T	5	mg/kg	----	20000	45 ±6	48 ±6	45 ±5	48 ±6	43 ±5	
Lead	EG005T	5	mg/kg	----	6000	<5 ..	<5 ..	6 ±1.0	<5 ..	<5 ..	
Molybdenum	EG005T	5	mg/kg	----	4000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..	
Nickel	EG005T	5	mg/kg	----	12000	167 ±16	150 ±15	147 ±14	150 ±15	138 ±14	
Selenium	EG005T	5	mg/kg	----	200	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..	
Silver	EG005T	2	mg/kg	----	720	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..	
Zinc	EG005T	5	mg/kg	----	140000	74 ±8	82 ±9	85 ±10	88 ±10	80 ±9	
<b>EG035T: Total Recoverable Mercury by FIMS</b>											
Mercury	EG035T	0.1	mg/kg	----	300	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>											
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000	1.1 ±0.2	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..	
<b>EK026SF: Total CN by Segmented Flow Analyser</b>											
Total Cyanide	EK026SF	5	mg/kg	----	10000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..	
<b>EK040T: Fluoride Total</b>											
Fluoride	EK040T	100	mg/kg	----	40000	<100 ..	<100 ..	<100 ..	<100 ..	<100 ..	
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>											
Benzene	EP074-UT	0.2	mg/kg	----	16	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	240	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	
<b>EP074I: Volatile Halogenated Compounds</b>											
Vinyl chloride	EP074-UT	0.50	mg/kg	----	4.8	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	11	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	50	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	
<b>EP075A: Phenolic Compounds (Halogenated)</b>											
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	320	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	413_12_52_S	413_08_29_S	413_16_24_S	413_16_10_S	413_08_15_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41
						EM2206896-001 MU	EM2206896-002 MU	EM2206896-003 MU	EM2206896-004 MU	EM2206896-005 MU
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	400	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
<b>EP075I: Organochlorine Pesticides</b>										
Heptachlor	EP075-EM	0.05	mg/kg	----	4.8	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	4.8	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	16	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	50	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	2600	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	40000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 413_12_52_S S_Primary_AL S	SX_OB_20220 413_08_29_S S_Primary_AL S	SX_OB_20220 413_16_24_S S_Primary_AL S	SX_OB_20220 413_16_10_S S_Primary_AL S	SX_OB_20220 413_08_15_S S_Primary_AL S
				Guideline	Guideline	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41
				Lower Limit	Upper Limit	EM2206896-001 MU	EM2206896-002 MU	EM2206896-003 MU	EM2206896-004 MU	EM2206896-005 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.8 ±0.1	7.7 ±0.1	7.7 ±0.1	7.8 ±0.1	7.7 ±0.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	500	40 ±5	29 ±4	25 ±4	35 ±5	30 ±4
Cadmium	EG005T	1	mg/kg	----	100	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..
Copper	EG005T	5	mg/kg	----	5000	45 ±6	48 ±6	45 ±5	48 ±6	43 ±5
Lead	EG005T	5	mg/kg	----	1500	<5 ..	<5 ..	6 ±1.0	<5 ..	<5 ..
Molybdenum	EG005T	5	mg/kg	----	1000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Nickel	EG005T	5	mg/kg	----	3000	167 ±16	150 ±15	147 ±14	150 ±15	138 ±14
Selenium	EG005T	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Silver	EG005T	2	mg/kg	----	180	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..
Tin	EG005T	10	mg/kg	----	500	<10 ..	<10 ..	<10 ..	<10 ..	<10 ..
Zinc	EG005T	5	mg/kg	----	35000	74 ±8	82 ±9	85 ±10	88 ±10	80 ±9
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	1.1 ±0.2	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	10000	<100 ..	<100 ..	<100 ..	<100 ..	<100 ..
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	4	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	70	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
<b>EP074I: Volatile Halogenated Compounds</b>										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	1.2	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	2.8	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	10	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	10	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	413_12_52_S	413_08_29_S	413_16_24_S	413_16_10_S	413_08_15_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41
						EM2206896-001 MU	EM2206896-002 MU	EM2206896-003 MU	EM2206896-004 MU	EM2206896-005 MU
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	560	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	5	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	100	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
<b>EP075I: Organochlorine Pesticides</b>										
Heptachlor	EP075-EM	0.05	mg/kg	----	1.2	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	1.2	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	4	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	10	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	650	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	10000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Lower Limit	Upper Limit	413_12_52_S	413_08_29_S	413_16_24_S	413_16_10_S	413_08_15_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Guideline	Guideline	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41
						EM2206896-001 MU	EM2206896-002 MU	EM2206896-003 MU	EM2206896-004 MU	EM2206896-005 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.8 ±0.1	7.7 ±0.1	7.7 ±0.1	7.8 ±0.1	7.7 ±0.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	20	40 ±5	29 ±4	25 ±4	35 ±5	30 ±4
Cadmium	EG005T	1	mg/kg	----	3	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..
Copper	EG005T	5	mg/kg	----	100	45 ±6	48 ±6	45 ±5	48 ±6	43 ±5
Lead	EG005T	5	mg/kg	----	300	<5 ..	<5 ..	6 ±1.0	<5 ..	<5 ..
Molybdenum	EG005T	5	mg/kg	----	40	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Nickel	EG005T	5	mg/kg	----	60	167 ±16	150 ±15	147 ±14	150 ±15	138 ±14
Selenium	EG005T	5	mg/kg	----	10	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Silver	EG005T	2	mg/kg	----	10	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..
Tin	EG005T	10	mg/kg	----	50	<10 ..	<10 ..	<10 ..	<10 ..	<10 ..
Zinc	EG005T	5	mg/kg	----	200	74 ±8	82 ±9	85 ±10	88 ±10	80 ±9
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	1.1 ±0.2	<1.0 ..	<1.0 ..	<1.0 ..	<1.0 ..
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	450	<100 ..	<100 ..	<100 ..	<100 ..	<100 ..
<b>EP066: Polychlorinated Biphenyls (PCB)</b>										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	1	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	7	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
<b>EP074I: Volatile Halogenated Compounds</b>										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	413_12_52_S	413_08_29_S	413_16_24_S	413_16_10_S	413_08_15_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41
						EM2206896-001 MU	EM2206896-002 MU	EM2206896-003 MU	EM2206896-004 MU	EM2206896-005 MU
<b>EP075A: Phenolic Compounds (Non-halogenated) - Continued</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	60	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	1	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
<b>EP075I: Organochlorine Pesticides</b>										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	100	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	1000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 413_16_22_S S_Triplicate_ ALS	SX_OB_20220 413_08_17_S S_Duplicate_ ALS	SX_OB_20220 413_20_16_S S_Primary_AL S	SX_OB_20220 414_00_02_S S_Primary_AL S	SX_OB_20220 414_03_53_S S_Primary_AL S
				Lower Limit	Upper Limit	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41
						EM2206896-006 MU	EM2206896-007 MU	EM2206896-010 MU	EM2206896-011 MU	EM2206896-012 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5	7.8 ±0.1	7.7 ±0.1	7.9 ±0.1	7.8 ±0.1	7.8 ±0.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	2000	30 ±4	39 ±5	26 ±4	25 ±4	32 ±4
Cadmium	EG005T	1	mg/kg	----	400	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..
Copper	EG005T	5	mg/kg	----	20000	42 ±5	46 ±6	54 ±7	40 ±5	38 ±5
Lead	EG005T	5	mg/kg	----	6000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Molybdenum	EG005T	5	mg/kg	----	4000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Nickel	EG005T	5	mg/kg	----	12000	132 ±13	174 ±17	161 ±16	150 ±15	117 ±12
Selenium	EG005T	5	mg/kg	----	200	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Silver	EG005T	2	mg/kg	----	720	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..
Zinc	EG005T	5	mg/kg	----	140000	77 ±9	102 ±11	95 ±11	74 ±8	70 ±8
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	300	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000	<1.0 ..	<1.0 ..	<1.0 ..	1.1 ±0.2	<1.0 ..
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	10000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	40000	<100 ..	<100 ..	100 ±30	<100 ..	<100 ..
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	16	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	240	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
<b>EP074I: Volatile Halogenated Compounds</b>										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	4.8	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	11	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	50	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	320	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										





**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	413_16_22_S	413_08_17_S	413_20_16_S	414_00_02_S	414_03_53_S
						S_Triplicate_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41
						EM2206896-006 MU	EM2206896-007 MU	EM2206896-010 MU	EM2206896-011 MU	EM2206896-012 MU
<b>EP075A: Phenolic Compounds (Non-halogenated) - Continued</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	400	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
<b>EP075I: Organochlorine Pesticides</b>										
Heptachlor	EP075-EM	0.05	mg/kg	----	4.8	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	4.8	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	16	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	50	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	2600	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	40000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 413_16_22_S S_Triplicate_ ALS	SX_OB_20220 413_08_17_S S_Duplicate_ ALS	SX_OB_20220 413_20_16_S S_Primary_AL S	SX_OB_20220 414_00_02_S S_Primary_AL S	SX_OB_20220 414_03_53_S S_Primary_AL S
				Guideline	Guideline	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41
				Lower Limit	Upper Limit	EM2206896-006 MU	EM2206896-007 MU	EM2206896-010 MU	EM2206896-011 MU	EM2206896-012 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.8 ±0.1	7.7 ±0.1	7.9 ±0.1	7.8 ±0.1	7.8 ±0.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	500	30 ±4	39 ±5	26 ±4	25 ±4	32 ±4
Cadmium	EG005T	1	mg/kg	----	100	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..
Copper	EG005T	5	mg/kg	----	5000	42 ±5	46 ±6	54 ±7	40 ±5	38 ±5
Lead	EG005T	5	mg/kg	----	1500	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Molybdenum	EG005T	5	mg/kg	----	1000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Nickel	EG005T	5	mg/kg	----	3000	132 ±13	174 ±17	161 ±16	150 ±15	117 ±12
Selenium	EG005T	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Silver	EG005T	2	mg/kg	----	180	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..
Tin	EG005T	10	mg/kg	----	500	<10 ..	<10 ..	<10 ..	<10 ..	<10 ..
Zinc	EG005T	5	mg/kg	----	35000	77 ±9	102 ±11	95 ±11	74 ±8	70 ±8
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	<1.0 ..	<1.0 ..	<1.0 ..	1.1 ±0.2	<1.0 ..
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	10000	<100 ..	<100 ..	100 ±30	<100 ..	<100 ..
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	4	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	70	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
<b>EP074I: Volatile Halogenated Compounds</b>										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	1.2	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	2.8	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	10	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	10	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	
				Sampling date/time	Guideline	Guideline	413_16_22_S	413_08_17_S	413_20_16_S	414_00_02_S	414_03_53_S
							S_Triplicate_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	
						EM2206896-006 MU	EM2206896-007 MU	EM2206896-010 MU	EM2206896-011 MU	EM2206896-012 MU	
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>											
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	560	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..	
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>											
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	5	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	100	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	
<b>EP075I: Organochlorine Pesticides</b>											
Heptachlor	EP075-EM	0.05	mg/kg	----	1.2	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	1.2	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	4	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	10	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	
<b>EP080/071: Total Petroleum Hydrocarbons</b>											
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	650	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..	
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	10000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..	



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 413_16_22_S S_Triplicate_ ALS	SX_OB_20220 413_08_17_S S_Duplicate_ ALS	SX_OB_20220 413_20_16_S S_Primary_AL S	SX_OB_20220 414_00_02_S S_Primary_AL S	SX_OB_20220 414_03_53_S S_Primary_AL S
				Guideline	Guideline	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41
				Lower Limit	Upper Limit	EM2206896-006 MU	EM2206896-007 MU	EM2206896-010 MU	EM2206896-011 MU	EM2206896-012 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.8 ±0.1	7.7 ±0.1	7.9 ±0.1	7.8 ±0.1	7.8 ±0.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	20	30 ±4	39 ±5	26 ±4	25 ±4	32 ±4
Cadmium	EG005T	1	mg/kg	----	3	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..
Copper	EG005T	5	mg/kg	----	100	42 ±5	46 ±6	54 ±7	40 ±5	38 ±5
Lead	EG005T	5	mg/kg	----	300	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Molybdenum	EG005T	5	mg/kg	----	40	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Nickel	EG005T	5	mg/kg	----	60	132 ±13	174 ±17	161 ±16	150 ±15	117 ±12
Selenium	EG005T	5	mg/kg	----	10	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Silver	EG005T	2	mg/kg	----	10	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..
Tin	EG005T	10	mg/kg	----	50	<10 ..	<10 ..	<10 ..	<10 ..	<10 ..
Zinc	EG005T	5	mg/kg	----	200	77 ±9	102 ±11	95 ±11	74 ±8	70 ±8
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	<1.0 ..	<1.0 ..	<1.0 ..	1.1 ±0.2	<1.0 ..
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	450	<100 ..	<100 ..	100 ±30	<100 ..	<100 ..
<b>EP066: Polychlorinated Biphenyls (PCB)</b>										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	1	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	7	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
<b>EP074I: Volatile Halogenated Compounds</b>										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										



**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	413_16_22_S	413_08_17_S	413_20_16_S	414_00_02_S	414_03_53_S
						S_Triplicate_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41	14-Apr-2022 15:41
						EM2206896-006 MU	EM2206896-007 MU	EM2206896-010 MU	EM2206896-011 MU	EM2206896-012 MU
<b>EP075A: Phenolic Compounds (Non-halogenated) - Continued</b>										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	60	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	1	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
<b>EP075I: Organochlorine Pesticides</b>										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
<b>EP080/071: Total Petroleum Hydrocarbons</b>										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	100	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	1000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..







**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	
				Sampling date/time	Guideline	Guideline	413_12_52_S	413_08_29_S	413_16_24_S	413_16_10_S	413_08_15_S
							S_Primary_AL S DI	S_Primary_AL S DI	S_Primary_AL S DI	S_Primary_AL S DI	S_Primary_AL S DI
				Lower Limit	Upper Limit	14-Apr-2022 15:00	14-Apr-2022 15:00	14-Apr-2022 15:00	14-Apr-2022 15:00	14-Apr-2022 15:00	
						EM2206896-013 MU	EM2206896-014 MU	EM2206896-015 MU	EM2206896-016 MU	EM2206896-017 MU	
<b>EA001: pH in soil using 0.01M CaCl extract</b>											
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----	
<b>EG005(ED093T): Total Metals by ICP-AES</b>											
Arsenic	EG005T	5	mg/kg	----	----	----	----	----	----	----	
Cadmium	EG005T	1	mg/kg	----	----	----	----	----	----	----	
Copper	EG005T	5	mg/kg	----	----	----	----	----	----	----	
Lead	EG005T	5	mg/kg	----	----	----	----	----	----	----	
Molybdenum	EG005T	5	mg/kg	----	----	----	----	----	----	----	
Nickel	EG005T	5	mg/kg	----	----	----	----	----	----	----	
Selenium	EG005T	5	mg/kg	----	----	----	----	----	----	----	
Silver	EG005T	2	mg/kg	----	----	----	----	----	----	----	
Tin	EG005T	10	mg/kg	----	----	----	----	----	----	----	
Zinc	EG005T	5	mg/kg	----	----	----	----	----	----	----	
<b>EG035T: Total Recoverable Mercury by FIMS</b>											
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----	
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>											
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----	
<b>EK026SF: Total CN by Segmented Flow Analyser</b>											
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----	
<b>EK040T: Fluoride Total</b>											
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----	
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>											
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----	
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----	
<b>EP074I: Volatile Halogenated Compounds</b>											
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----	
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	----	----	----	----	----	----	
Vinyl chloride	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----	
<b>EP075A: Phenolic Compounds (Halogenated)</b>											
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----	
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>											







**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 413_12_52_S S_Primary_AL S DI	SX_OB_20220 413_08_29_S S_Primary_AL S DI	SX_OB_20220 413_16_24_S S_Primary_AL S DI	SX_OB_20220 413_16_10_S S_Primary_AL S DI	SX_OB_20220 413_08_15_S S_Primary_AL S DI
				Guideline	Guideline	14-Apr-2022 15:00	14-Apr-2022 15:00	14-Apr-2022 15:00	14-Apr-2022 15:00	14-Apr-2022 15:00
				Lower Limit	Upper Limit	EM2206896-013 MU	EM2206896-014 MU	EM2206896-015 MU	EM2206896-016 MU	EM2206896-017 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----
<b>EG005(ED093T): Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	----	----	----	----	----	----
Cadmium	EG005T	1	mg/kg	----	----	----	----	----	----	----
Copper	EG005T	5	mg/kg	----	----	----	----	----	----	----
Lead	EG005T	5	mg/kg	----	----	----	----	----	----	----
Molybdenum	EG005T	5	mg/kg	----	----	----	----	----	----	----
Nickel	EG005T	5	mg/kg	----	----	----	----	----	----	----
Selenium	EG005T	5	mg/kg	----	----	----	----	----	----	----
Silver	EG005T	2	mg/kg	----	----	----	----	----	----	----
Tin	EG005T	10	mg/kg	----	----	----	----	----	----	----
Zinc	EG005T	5	mg/kg	----	----	----	----	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	----	----	----	----	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										









**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220	SX_OB_20220
				Guideline	Guideline	413_16_22_S	413_08_17_S	413_20_16_S	414_00_02_S	414_03_53_S
						S_Triplicate_ALS DI	S_Duplicate_ALS DI	S_Primary_ALS DI	S_Primary_ALS DI	S_Primary_ALS DI
				Lower Limit	Upper Limit	14-Apr-2022 15:00	14-Apr-2022 15:00	14-Apr-2022 15:00	14-Apr-2022 15:00	14-Apr-2022 15:00
						EM2206896-018 MU	EM2206896-019 MU	EM2206896-020 MU	EM2206896-021 MU	EM2206896-022 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----
<b>EG005(ED093T): Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	----	----	----	----	----	----
Cadmium	EG005T	1	mg/kg	----	----	----	----	----	----	----
Copper	EG005T	5	mg/kg	----	----	----	----	----	----	----
Lead	EG005T	5	mg/kg	----	----	----	----	----	----	----
Molybdenum	EG005T	5	mg/kg	----	----	----	----	----	----	----
Nickel	EG005T	5	mg/kg	----	----	----	----	----	----	----
Selenium	EG005T	5	mg/kg	----	----	----	----	----	----	----
Silver	EG005T	2	mg/kg	----	----	----	----	----	----	----
Tin	EG005T	10	mg/kg	----	----	----	----	----	----	----
Zinc	EG005T	5	mg/kg	----	----	----	----	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	----	----	----	----	----	----
Vinyl chloride	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										





**Soil Hazard Categorisation and Management**

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220 413_16_22_S S_Triplicate_ ALS DI	SX_OB_20220 413_08_17_S S_Duplicate_ ALS DI	SX_OB_20220 413_20_16_S S_Primary_AL S DI	SX_OB_20220 414_00_02_S S_Primary_AL S DI	SX_OB_20220 414_03_53_S S_Primary_AL S DI
				Guideline	Guideline	14-Apr-2022 15:00	14-Apr-2022 15:00	14-Apr-2022 15:00	14-Apr-2022 15:00	14-Apr-2022 15:00
				Lower Limit	Upper Limit	EM2206896-018 MU	EM2206896-019 MU	EM2206896-020 MU	EM2206896-021 MU	EM2206896-022 MU
<b>EA001: pH in soil using 0.01M CaCl extract</b>										
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----
<b>EG005(ED093T): Total Metals by ICP-AES</b>										
Arsenic	EG005T	5	mg/kg	----	----	----	----	----	----	----
Cadmium	EG005T	1	mg/kg	----	----	----	----	----	----	----
Copper	EG005T	5	mg/kg	----	----	----	----	----	----	----
Lead	EG005T	5	mg/kg	----	----	----	----	----	----	----
Molybdenum	EG005T	5	mg/kg	----	----	----	----	----	----	----
Nickel	EG005T	5	mg/kg	----	----	----	----	----	----	----
Selenium	EG005T	5	mg/kg	----	----	----	----	----	----	----
Silver	EG005T	2	mg/kg	----	----	----	----	----	----	----
Tin	EG005T	10	mg/kg	----	----	----	----	----	----	----
Zinc	EG005T	5	mg/kg	----	----	----	----	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>										
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>										
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----
<b>EK040T: Fluoride Total</b>										
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	----	----	----	----	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>										
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----
<b>EP074I: Volatile Halogenated Compounds</b>										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Halogenated)</b>										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>										





## QUALITY CONTROL REPORT

<b>Work Order</b>	<b>: EM2206896</b>	<b>Page</b>	: 1 of 29
<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>	: 14-Apr-2022
<b>Order number</b>	: ----	<b>Date Analysis Commenced</b>	: 14-Apr-2022
<b>C-O-C number</b>	: 20220414041718-ALS-8	<b>Issue Date</b>	: 26-Apr-2022
<b>Sampler</b>	: ----		
<b>Site</b>	: 20220414041718-ALS-8		
<b>Quote number</b>	: EN/150/19 -WGTP -Bulk Sample Quote		
<b>No. of samples received</b>	: 22		
<b>No. of samples analysed</b>	: 22		



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
Jarvis Nheu	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC



## General Comments

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

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

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

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

## Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4296870)</b>									
EM2206896-001	SX_OB_20220413_12_52_ SS_Primary_ALS	EG005T: Nickel	7440-02-0	2	mg/kg	167	154	8.3	0% - 20%
EM2206896-001	SX_OB_20220413_12_52_ 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	94	71	27.2	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	40	30	29.1	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	45	40	12.9	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<10	<10	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	74	60	20.6	0% - 50%
EM2206896-012	SX_OB_20220414_03_53_ 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	87	84	4.1	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	117	121	3.4	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	32	29	9.3	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	38	37	3.7	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<10	<10	0.0	No Limit



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: 4296870) - continued</b>									
EM2206896-012	SX_OB_20220414_03_53_ SS_Primary_ALS	EG005T: Zinc	7440-66-6	5	mg/kg	70	70	0.0	0% - 50%
<b>EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4296175)</b>									
EM2206784-001	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.4	7.5	0.0	0% - 20%
EM2206896-005	SX_OB_20220413_08_15_ SS_Primary_ALS	EA001: pH (CaCl2)	----	0.1	pH Unit	7.7	7.7	0.0	0% - 20%
<b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4296752)</b>									
EM2206896-001	SX_OB_20220413_12_52_ SS_Primary_ALS	EA055: Moisture Content	----	0.1	%	29.0	28.6	1.7	0% - 20%
<b>EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4296869)</b>									
EM2206896-001	SX_OB_20220413_12_52_ SS_Primary_ALS	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2206896-012	SX_OB_20220414_03_53_ 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: 4296910)</b>									
EM2206896-001	SX_OB_20220413_12_52_ SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	1.1	1.2	0.0	No Limit
EM2206896-012	SX_OB_20220414_03_53_ SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
<b>EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4296991)</b>									
EM2206865-009	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EM2206896-010	SX_OB_20220413_20_16_ SS_Primary_ALS	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<5	<5	0.0	No Limit
<b>EK040T: Fluoride Total (QC Lot: 4296907)</b>									
EM2206896-001	SX_OB_20220413_12_52_ SS_Primary_ALS	EK040T: Fluoride	16984-48-8	40	mg/kg	<100	<100	0.0	No Limit
EM2206896-012	SX_OB_20220414_03_53_ SS_Primary_ALS	EK040T: Fluoride	16984-48-8	40	mg/kg	<100	110	13.2	No Limit
<b>EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4296314)</b>									
EM2206896-001	SX_OB_20220413_12_52_ 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: 4288998)</b>									
EM2206896-001	SX_OB_20220413_12_52_ SS_Primary_ALS	EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



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: 4288998) - continued</b>									
EM2206896-001	SX_OB_20220413_12_52_ SS_Primary_ALS	EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
<b>EP074H: Naphthalene (QC Lot: 4288998)</b>									
EM2206896-001	SX_OB_20220413_12_52_ 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: 4288998)</b>									
EM2206896-001	SX_OB_20220413_12_52_ 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: 4296313)</b>									
EM2206896-001	SX_OB_20220413_12_52_ SS_Primary_ALS	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-9 0-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit
		<b>EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4296313)</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>EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4296313) - continued</b>									
EM2206896-001	SX_OB_20220413_12_52_ SS_Primary_ALS	EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: Dinoseb	88-85-7	5	mg/kg	<20	<20	0.0	No Limit
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<20	<20	0.0	No Limit		
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4296313)</b>									
EM2206896-001	SX_OB_20220413_12_52_ SS_Primary_ALS	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	<1.0	0.0	No Limit
<b>EP075I: Organochlorine Pesticides (QC Lot: 4296313)</b>									
EM2206896-001	SX_OB_20220413_12_52_ SS_Primary_ALS	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP075I: Organochlorine Pesticides (QC Lot: 4296313) - continued</b>									
EM2206896-001	SX_OB_20220413_12_52_ SS_Primary_ALS	EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EP075-EM: 4,4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
<b>EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4288998)</b>									
EM2206896-001	SX_OB_20220413_12_52_ 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: 4296315)</b>									
EM2206896-001	SX_OB_20220413_12_52_ 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: 4288998)</b>									
EM2206896-001	SX_OB_20220413_12_52_ 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: 4296315)</b>									
EM2206896-001	SX_OB_20220413_12_52_ 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: 4296300)</b>									
EM2206624-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2206896-002	SX_OB_20220413_08_29_ 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



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4296300) - continued</b>									
EM2206896-002	SX_OB_20220413_08_29_ SS_Primary_ALS	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: 4296300)</b>									
EM2206624-001	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		
EM2206896-002	SX_OB_20220413_08_29_ 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: 4296300)</b>									
EM2206624-001	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





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: 4296300) - continued</b>									
EM2206624-001	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2206896-002	SX_OB_20220413_08_29_ SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4296300)</b>									
EM2206624-001	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
EM2206896-002	SX_OB_20220413_08_29_ 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: 4296300)</b>									
EM2206624-001	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
<b>EP231P: PFAS Sums (QC Lot: 4296300) - continued</b>									
EM2206896-002	SX_OB_20220413_08_29_ 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: 4297319)</b>									
EM2206868-001	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
EM2206896-001	SX_OB_20220413_12_52_ 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: 4298148)</b>									
EM2206868-009	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
EM2206896-014	SX_OB_20220413_08_29_ SS_Primary_ALS DI	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: 4299842)</b>									
EM2206924-001	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	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit



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: 4299842) - continued</b>									
EM2206924-001	Anonymous	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
EM2206924-004	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.64	0.60	6.3	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.65	0.60	8.5	0% - 20%
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.20	0.18	8.5	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.16	0.15	7.3	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.05	0.05	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: 4297319)</b>									
EM2206868-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EM2206896-001	SX_OB_20220413_12_52_ 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: 4298148)</b>									
EM2206868-009	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



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: 4298148) - continued</b>									
EM2206868-009	Anonymous	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
EM2206896-014	SX_OB_20220413_08_29_ SS_Primary_ALS DI	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: 4299842)</b>									
EM2206924-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.02	<0.02	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
EM2206924-004	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.10	0.10	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.12	0.12	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.26	0.25	7.3	0% - 50%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.08	0.06	21.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit		
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit		
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4297319)</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: 4297319) - continued</b>									
EM2206868-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2206896-001	SX_OB_20220413_12_52_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: 4298148)</b>									
EM2206868-009	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



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: 4298148) - continued</b>									
EM2206896-014	SX_OB_20220413_08_29_ SS_Primary_ALS DI	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
<b>EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4299842)</b>									
EM2206924-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2206924-004	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



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: 4297319)</b>									
EM2206868-001	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
EM2206896-001	SX_OB_20220413_12_52_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: 4298148)</b>									
EM2206868-009	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
EM2206896-014	SX_OB_20220413_08_29_SS_Primary_ALS DI	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: 4299842)</b>									
EM2206924-001	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



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: 4299842) - continued</b>									
EM2206924-001	Anonymous	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2206924-004	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: 4297319)</b>									
EM2206868-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2206896-001	SX_OB_20220413_12_52_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: 4298148)</b>									
EM2206868-009	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
EM2206896-014	SX_OB_20220413_08_29_SS_Primary_ALS DI	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
<b>EP231P: PFAS Sums (QC Lot: 4299842)</b>									
EM2206924-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.01	0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.01	0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	0.01	0.01	0.0	No Limit
EM2206924-004	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	2.26	2.11	6.9	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	1.29	1.20	7.2	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	2.05	1.91	7.1	0% - 20%





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

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

Sub-Matrix: **SOIL**

Method: 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: 4296870)</b>								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	84.9	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	62.8	50.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	82.9	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	73.6	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	74.8	70.0	130
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	72.3	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	78.4	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	74.0	70.0	130
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	82.2	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	75.7	70.0	130
<b>EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4290293)</b>								
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.2	----	----	----	----
<b>EA001: pH in soil using 0.01M CaCl extract (QCLot: 4296175)</b>								
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	101	98.8	101
					7 pH Unit	101	99.3	101
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4296869)</b>								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	90.6	70.0	130
<b>EG048G: Hexavalent Chromium (Alkaline Digest) (QCLot: 4296910)</b>								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	85.4	70.0	130
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4296991)</b>								
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	96.1	70.0	130
<b>EK040T: Fluoride Total (QCLot: 4296907)</b>								
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	78.6	75.2	110
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4296314)</b>								
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	99.6	67.4	136
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4288998)</b>								
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	88.4	69.2	116
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	89.4	67.7	116
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	88.0	66.6	115
EP074-UT: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	4.2 mg/kg	86.4	65.2	112
	106-42-3							
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	87.8	69.4	111



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4288998) - continued</b>									
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	88.3	68.4	110	
<b>EP074H: Naphthalene (QCLot: 4288998)</b>									
EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	0.6 mg/kg	88.5	72.3	114	
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4288998)</b>									
EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	91.6	47.0	138	
EP074-UT: 1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	83.1	57.6	125	
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	85.1	72.3	115	
EP074-UT: trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	86.8	60.5	122	
EP074-UT: cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	88.4	70.3	112	
EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	88.8	66.6	115	
EP074-UT: 1,1,1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	86.8	64.4	122	
EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	84.4	58.4	127	
EP074-UT: 1,2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	111	72.9	114	
EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	86.8	64.7	115	
EP074-UT: 1,1,2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	96.3	72.6	116	
EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	87.4	60.0	119	
EP074-UT: 1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	91.6	71.8	116	
EP074-UT: 1,1,1,2,2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	99.1	66.1	116	
EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	78.4	39.8	128	
EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	88.8	70.3	113	
EP074-UT: 1,4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	81.8	62.6	113	
EP074-UT: 1,2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	87.2	70.8	110	
EP074-UT: 1,2,4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	71.9	48.4	120	
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4296313)</b>									
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	87.0	74.5	126	
EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	87.0	72.7	126	
EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	87.5	73.5	132	
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	91.1	72.8	128	
EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	2 mg/kg	90.8	73.3	134	
EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	2 mg/kg	86.3	72.4	128	
EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	87.4	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	89.8	71.9	128	
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	85.6	54.4	135	
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4296313)</b>									
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	88.4	71.5	130	
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	85.4	73.4	129	
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	84.7	74.3	129	



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4296313) - continued</b>									
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	85.3	70.9	133	
EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	87.1	71.8	132	
EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	82.9	41.0	156	
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	104	65.3	134	
EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	87.7	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	85.4	62.0	128	
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	77.2	34.5	137	
<b>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4296313)</b>									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	89.8	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	90.4	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	90.8	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	92.5	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	87.4	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	87.6	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	88.0	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	88.9	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	83.0	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	86.2	75.0	133	
EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	4 mg/kg	86.6	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	86.5	65.1	130	
EP075-EM: Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	87.6	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	87.8	72.9	135	
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	87.2	71.3	134	
<b>EP075I: Organochlorine Pesticides (QCLot: 4296313)</b>									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	86.0	71.0	129	
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	87.2	74.8	126	
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	88.0	75.7	130	
EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	2 mg/kg	87.7	70.8	130	
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	88.8	76.5	134	
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	86.4	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	87.2	76.8	130	
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	87.6	73.6	130	
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	88.5	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	88.4	75.3	131	
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	88.5	69.4	134	
EP075-EM: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	84.7	71.0	132	
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	83.0	78.0	133	
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	83.9	69.0	143	



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>EP075I: Organochlorine Pesticides (QCLot: 4296313) - continued</b>									
EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	2 mg/kg	76.5	55.7	145	
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	83.7	71.4	135	
EP075-EM: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	88.2	74.8	134	
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	84.6	70.2	135	
EP075-EM: 4,4'-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	82.6	77.7	133	
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	83.6	63.6	135	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4288998)</b>									
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	92.3	61.1	119	
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4296315)</b>									
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	680 mg/kg	94.3	74.4	129	
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	2830 mg/kg	98.2	81.0	123	
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1340 mg/kg	99.2	81.8	121	
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	4850 mg/kg	97.9	70.0	130	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4288998)</b>									
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	92.6	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: 4296315)</b>									
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	980 mg/kg	93.8	75.4	132	
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	3210 mg/kg	111	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	270 mg/kg	82.3	73.3	136	
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	4460 mg/kg	105	70.0	130	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4296300)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	93.6	72.0	128	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	110	73.0	123	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	89.4	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	127	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	122	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	113	59.0	134	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4296300)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	100	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	78.2	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.0	69.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.6	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	74.2	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	64.0	136	



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: 4296300) - continued</b>									
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.8	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	127	69.0	133	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4296300)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	71.0	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	110	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	99.1	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	90.9	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.1	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	115	61.0	139	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4296300)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	92.9	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	96.3	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	113	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	101	70.0	130	
<b>EP231P: PFAS Sums (QCLot: 4296300)</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: 4297319)</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	100	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	94.3	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	119	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	112	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	104	53.0	142	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4298148)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	89.8	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	108	71.0	127	



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: 4298148) - continued</b>									
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	112	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	104	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	109	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	103	53.0	142	
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4299842)</b>									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	103	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	99.7	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	99.8	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	100	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	98.0	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	105	53.0	142	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4297319)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	81.9	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	104	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	100	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	95.4	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	94.7	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	104	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	109	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	104	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	97.9	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	86.7	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	90.6	71.0	132	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4298148)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	96.8	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	107	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	89.5	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	98.4	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	95.7	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	83.5	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	96.5	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	114	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	101	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	130	71.0	132	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4299842)</b>									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	97.1	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	99.2	72.0	129	



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: 4299842) - continued</b>									
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	107	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	95.3	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	103	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	95.7	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	105	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	97.8	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	101	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	95.8	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	108	71.0	132	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4297319)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	98.8	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	114	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	102	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	88.0	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	97.3	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	108	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	93.8	61.0	135	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4298148)</b>									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	98.6	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	105	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	111	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	110	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	85.4	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	86.9	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	94.2	61.0	135	
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4299842)</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	100	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	94.7	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	98.1	70.0	130	



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: 4299842) - continued</b>									
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	102	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	104	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	103	61.0	135	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4297319)</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	98.1	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	102	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	79.3	70.0	130	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4298148)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	96.5	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	102	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	111	67.0	138	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	87.8	70.0	130	
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4299842)</b>									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	93.7	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	103	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	106	67.0	138	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	77.2	70.0	130	
<b>EP231P: PFAS Sums (QCLot: 4297319)</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: 4298148)</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: 4299842)</b>									
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----	
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----	
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----	





## Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Concentration	SpikeRecovery(%) MS	Acceptable Limits (%)	
						Low	High
<b>EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4296870)</b>							
EM2206896-002	SX_OB_20220413_08_29_SS_Primary_ALS	EG005T: Arsenic	7440-38-2	50 mg/kg	78.3	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	82.1	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	91.9	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	84.0	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	81.6	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	98.9	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	98.2	80.0	120
<b>EG035T: Total Recoverable Mercury by FIMS (QCLot: 4296869)</b>							
EM2206896-002	SX_OB_20220413_08_29_SS_Primary_ALS	EG035T: Mercury	7439-97-6	0.5 mg/kg	106	76.0	116
<b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4296910)</b>							
EM2206896-002	SX_OB_20220413_08_29_SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	89.8	58.0	114
EM2206896-002	SX_OB_20220413_08_29_SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	102	58.0	114
<b>EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4296991)</b>							
EM2206865-012	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	91.4	70.0	130
<b>EK040T: Fluoride Total (QCLot: 4296907)</b>							
EM2206896-002	SX_OB_20220413_08_29_SS_Primary_ALS	EK040T: Fluoride	16984-48-8	400 mg/kg	76.0	70.0	130
<b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4296314)</b>							
EM2206896-003	SX_OB_20220413_16_24_SS_Primary_ALS	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	103	59.6	152
<b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4288998)</b>							
EM2206896-002	SX_OB_20220413_08_29_SS_Primary_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	82.8	53.7	130
		EP074-UT: Toluene	108-88-3	2 mg/kg	84.1	55.1	124
<b>EP074I: Volatile Halogenated Compounds (QCLot: 4288998)</b>							
EM2206896-002	SX_OB_20220413_08_29_SS_Primary_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	76.8	38.4	145
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	79.6	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	79.7	55.5	122
<b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 4296313)</b>							
EM2206896-002	SX_OB_20220413_08_29_SS_Primary_ALS	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	87.0	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	87.2	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	64.6	10.0	144
<b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4296313)</b>							
EM2206896-002	SX_OB_20220413_08_29_SS_Primary_ALS	EP075-EM: Phenol	108-95-2	3 mg/kg	87.7	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	75.7	34.2	129



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>EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4296313)</b>							
EM2206896-002	SX_OB_20220413_08_29_SS_Primary_ALS	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	84.1	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	88.2	37.8	152
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4288998)</b>							
EM2206896-002	SX_OB_20220413_08_29_SS_Primary_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	74.9	42.3	111
<b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 4296315)</b>							
EM2206896-004	SX_OB_20220413_16_10_SS_Primary_ALS	EP071-EM: C10 - C14 Fraction	----	680 mg/kg	98.2	71.3	126
		EP071-EM: C15 - C28 Fraction	----	2830 mg/kg	101	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1340 mg/kg	102	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	4850 mg/kg	101	70.0	130
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4288998)</b>							
EM2206896-002	SX_OB_20220413_08_29_SS_Primary_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	74.8	39.9	109
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4296315)</b>							
EM2206896-004	SX_OB_20220413_16_10_SS_Primary_ALS	EP071-EM: >C10 - C16 Fraction	----	980 mg/kg	97.1	71.5	130
		EP071-EM: >C16 - C34 Fraction	----	3210 mg/kg	114	76.9	119
		EP071-EM: >C34 - C40 Fraction	----	270 mg/kg	80.9	65.3	139
		EP071-EM: >C10 - C40 Fraction (sum)	----	4460 mg/kg	108	70.0	130
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4296300)</b>							
EM2206624-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	88.9	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	99.6	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	96.8	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	121	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	116	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	126	59.0	134
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4296300)</b>							
EM2206624-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	89.4	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	114	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	76.6	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	100	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	90.8	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	102	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	70.0	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	96.7	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	95.1	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	78.7	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	119	69.0	133
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4296300)</b>							
EM2206624-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	103	67.0	137



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>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4296300) - continued</b>							
EM2206624-002	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	70.0	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	102	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	93.2	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	91.4	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	106	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	96.8	61.0	139
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4296300)</b>							
EM2206624-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	91.8	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	97.7	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	110	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	91.6	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: 4297319)</b>							
EM2206871-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	110	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	97.8	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	94.9	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	114	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	107	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	100	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4298148)</b>							
EM2206896-013	SX_OB_20220413_12_52_SS_Primary_ALS DI	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	91.8	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	106	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	109	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	110	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	90.6	53.0	142
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4299842)</b>							
EM2206924-003	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	79.8	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	86.1	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	102	69.0	134



Sub-Matrix: WATER

				Matrix Spike (MS) Report					
				Spike	SpikeRecovery(%)	Acceptable Limits (%)			
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High		
<b>EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4299842) - continued</b>									
EM2206924-003	Anonymous	EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	# Not Determined	65.0	140		
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L		115	53.0	142	
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4297319)</b>									
EM2206871-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	78.1	73.0	129		
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	101	72.0	129		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	107	72.0	129		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	95.1	72.0	130		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	97.3	71.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	103	69.0	130		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	115	71.0	129		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	99.3	69.0	133		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	101	72.0	134		
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	89.1	65.0	144		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	85.3	71.0	132		
<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4298148)</b>									
EM2206896-013	SX_OB_20220413_12_52_SS_Primary_ALS DI	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	86.7	73.0	129		
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	109	72.0	129		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	90.7	72.0	129		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	102	72.0	130		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	98.4	71.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	102	69.0	130		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	80.4	71.0	129		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	92.6	69.0	133		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	95.8	72.0	134		
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	# 59.8	65.0	144		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	107	71.0	132		
		<b>EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4299842)</b>							
		EM2206924-003	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	79.1	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3			0.25 µg/L	92.9	72.0	129		
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4			0.25 µg/L	106	72.0	129		
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9			0.25 µg/L	91.9	72.0	130		
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1			0.25 µg/L	92.9	71.0	133		
EP231X: Perfluorononanoic acid (PFNA)	375-95-1			0.25 µg/L	90.7	69.0	130		
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2			0.25 µg/L	104	71.0	129		
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8			0.25 µg/L	91.2	69.0	133		
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1			0.25 µg/L	89.7	72.0	134		
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8			0.25 µg/L	88.9	65.0	144		



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: 4299842) - continued</b>							
EM2206924-003	Anonymous	EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	104	71.0	132
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4297319)</b>							
EM2206871-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	102	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	110	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	106	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	96.2	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	105	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	106	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	104	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4298148)</b>							
EM2206896-013	SX_OB_20220413_12_52_SS_Primary_ALS DI	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	105	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	100	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	# 134	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	99.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	87.4	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	96.6	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	99.7	61.0	135
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4299842)</b>							
EM2206924-003	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	95.6	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	91.5	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	94.3	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	92.4	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	98.1	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	108	65.0	136



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
<b>EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4299842) - continued</b>							
EM2206924-003	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	98.1	61.0	135
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4297319)</b>							
EM2206871-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	104	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	98.2	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	107	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	80.6	70.0	130
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4298148)</b>							
EM2206896-013	SX_OB_20220413_12_52_SS_Primary_ALS DI	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	98.2	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	106	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	106	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: 4299842)</b>							
EM2206924-003	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	90.0	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	106	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	109	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	103	70.0	130

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

Work Order	: EM2206896	Page	: 1 of 14
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: Craig Trimbur	Telephone	: +61-3-8549 9600
Project	: JC0927	Date Samples Received	: 14-Apr-2022
Site	: 20220414041718-ALS-8	Issue Date	: 26-Apr-2022
Sampler	: ----	No. of samples received	: 22
Order number	: ----	No. of samples analysed	: 22

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

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

### Summary of Outliers

#### Outliers : Quality Control Samples

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

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

#### Outliers : Analysis Holding Time Compliance

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

#### Outliers : Frequency of Quality Control Samples

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



**Outliers : Quality Control Samples**

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
<b>Matrix Spike (MS) Recoveries</b>							
EP231A: Perfluoroalkyl Sulfonic Acids	EM2206924--003	Anonymous	<b>Perfluorooctane sulfonic acid (PFOS)</b>	1763-23-1	Not Determined	----	<b>MS recovery not determined, background level greater than or equal to 4x spike level.</b>
EP231B: Perfluoroalkyl Carboxylic Acids	EM2206896--013	SX_OB_20220413_12_52_SS	<b>Perfluorotridecanoic acid (PFTTrDA)</b>	72629-94-8	59.8 %	65.0-144%	<b>Recovery less than lower data quality objective</b>
EP231C: Perfluoroalkyl Sulfonamides	EM2206896--013	SX_OB_20220413_12_52_SS	<b>N-Ethyl perfluorooctane sulfonamide (EtFOSA)</b>	4151-50-2	134 %	70.0-130%	<b>Recovery greater than upper data quality objective</b>

**Analysis Holding Time Compliance**

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

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

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

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

Matrix: **SOIL**

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

Method	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EA001: pH in soil using 0.01M CaCl extract</b>								
<b>Soil Glass Jar - Unpreserved (EA001)</b>								
SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	21-Apr-2022	✓	21-Apr-2022	22-Apr-2022	✓
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
<b>Soil Glass Jar - Unpreserved (EA055)</b>								
SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	----	----	----	21-Apr-2022	28-Apr-2022	✓





Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
<b>Soil Glass Jar - Unpreserved (EG005T)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	11-Oct-2022	✓	21-Apr-2022	11-Oct-2022	✓
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
<b>Soil Glass Jar - Unpreserved (EG035T)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	12-May-2022	✓	22-Apr-2022	12-May-2022	✓
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>								
<b>Soil Glass Jar - Unpreserved (EG048G)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	22-Apr-2022	12-May-2022	✓	23-Apr-2022	29-Apr-2022	✓
<b>EK026SF: Total CN by Segmented Flow Analyser</b>								
<b>Soil Glass Jar - Unpreserved (EK026SF)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	28-Apr-2022	✓	22-Apr-2022	05-May-2022	✓
<b>EK040T: Fluoride Total</b>								
<b>Soil Glass Jar - Unpreserved (EK040T)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	22-Apr-2022	12-May-2022	✓	26-Apr-2022	12-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_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	18-Apr-2022	11-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>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_20220413_12_52_SS_Primary_ALS - DI, SX_OB_20220413_16_24_SS_Primary_ALS - DI, SX_OB_20220413_08_15_SS_Primary_ALS - DI, SX_OB_20220413_16_22_SS_Triplicate_ALS - DI, SX_OB_20220413_08_17_SS_Duplicate_ALS - DI,	SX_OB_20220413_08_29_SS_Primary_ALS - DI, SX_OB_20220413_16_10_SS_Primary_ALS - DI, SX_OB_20220413_20_16_SS_Primary_ALS - DI, SX_OB_20220414_00_02_SS_Primary_ALS - DI, SX_OB_20220414_03_53_SS_Primary_ALS - DI	14-Apr-2022	18-Apr-2022	11-Oct-2022	✓	----	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
<b>Soil Glass Jar - Unpreserved (EP066-EM)</b>								
SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	28-Apr-2022	✓	21-Apr-2022	31-May-2022	✓
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	14-Apr-2022	21-Apr-2022	✓	14-Apr-2022	21-Apr-2022	✓
<b>EP074H: Naphthalene</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	14-Apr-2022	21-Apr-2022	✓	14-Apr-2022	21-Apr-2022	✓
<b>EP074I: Volatile Halogenated Compounds</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	14-Apr-2022	21-Apr-2022	✓	14-Apr-2022	21-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>EP075A: Phenolic Compounds (Halogenated)</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	28-Apr-2022	✓	21-Apr-2022	31-May-2022	✓
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	28-Apr-2022	✓	21-Apr-2022	31-May-2022	✓
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	28-Apr-2022	✓	21-Apr-2022	31-May-2022	✓
<b>EP075I: Organochlorine Pesticides</b>								
<b>Soil Glass Jar - Unpreserved (EP075-EM)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	28-Apr-2022	✓	21-Apr-2022	31-May-2022	✓
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	14-Apr-2022	21-Apr-2022	✓	14-Apr-2022	21-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	28-Apr-2022	✓	21-Apr-2022	31-May-2022	✓



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
<b>Soil Glass Jar - Unpreserved (EP074-UT)</b>								
SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	14-Apr-2022	21-Apr-2022	✓	14-Apr-2022	21-Apr-2022	✓
<b>Soil Glass Jar - Unpreserved (EP071-EM)</b>								
SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	28-Apr-2022	✓	21-Apr-2022	31-May-2022	✓
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	11-Oct-2022	✓	22-Apr-2022	31-May-2022	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	11-Oct-2022	✓	22-Apr-2022	31-May-2022	✓
<b>EP231C: Perfluoroalkyl Sulfonamides</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	11-Oct-2022	✓	22-Apr-2022	31-May-2022	✓
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
<b>HDPE Soil Jar (EP231X)</b>								
SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	11-Oct-2022	✓	22-Apr-2022	31-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>EP231P: PFAS Sums</b>								
<b>HDPE Soil Jar (EP231X)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	14-Apr-2022	21-Apr-2022	11-Oct-2022	✓	22-Apr-2022	31-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	
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>								
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220413_16_48_SR_Rinsate_ALS,	SX_OB_20220413_16_49_SB_Blank_ALS	14-Apr-2022	22-Apr-2022	11-Oct-2022	✓	22-Apr-2022	11-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	18-Apr-2022	21-Apr-2022	15-Oct-2022	✓	21-Apr-2022	15-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220413_12_52_SS_Primary_ALS - DI, SX_OB_20220413_16_24_SS_Primary_ALS - DI, SX_OB_20220413_08_15_SS_Primary_ALS - DI, SX_OB_20220413_16_22_SS_Triplicate_ALS - DI, SX_OB_20220413_08_17_SS_Duplicate_ALS - DI,	SX_OB_20220413_08_29_SS_Primary_ALS - DI, SX_OB_20220413_16_10_SS_Primary_ALS - DI, SX_OB_20220413_20_16_SS_Primary_ALS - DI, SX_OB_20220414_00_02_SS_Primary_ALS - DI, SX_OB_20220414_03_53_SS_Primary_ALS - DI	18-Apr-2022	22-Apr-2022	15-Oct-2022	✓	22-Apr-2022	15-Oct-2022	✓
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>								
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220413_16_48_SR_Rinsate_ALS,	SX_OB_20220413_16_49_SB_Blank_ALS	14-Apr-2022	22-Apr-2022	11-Oct-2022	✓	22-Apr-2022	11-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	18-Apr-2022	21-Apr-2022	15-Oct-2022	✓	21-Apr-2022	15-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220413_12_52_SS_Primary_ALS - DI, SX_OB_20220413_16_24_SS_Primary_ALS - DI, SX_OB_20220413_08_15_SS_Primary_ALS - DI, SX_OB_20220413_16_22_SS_Triplicate_ALS - DI, SX_OB_20220413_08_17_SS_Duplicate_ALS - DI,	SX_OB_20220413_08_29_SS_Primary_ALS - DI, SX_OB_20220413_16_10_SS_Primary_ALS - DI, SX_OB_20220413_20_16_SS_Primary_ALS - DI, SX_OB_20220414_00_02_SS_Primary_ALS - DI, SX_OB_20220414_03_53_SS_Primary_ALS - DI	18-Apr-2022	22-Apr-2022	15-Oct-2022	✓	22-Apr-2022	15-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>EP231C: Perfluoroalkyl Sulfonamides</b>								
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220413_16_48_SR_Rinsate_ALS,	SX_OB_20220413_16_49_SB_Blank_ALS	14-Apr-2022	22-Apr-2022	11-Oct-2022	✓	22-Apr-2022	11-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	18-Apr-2022	21-Apr-2022	15-Oct-2022	✓	21-Apr-2022	15-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220413_12_52_SS_Primary_ALS - DI, SX_OB_20220413_16_24_SS_Primary_ALS - DI, SX_OB_20220413_08_15_SS_Primary_ALS - DI, SX_OB_20220413_16_22_SS_Triplicate_ALS - DI, SX_OB_20220413_08_17_SS_Duplicate_ALS - DI,	SX_OB_20220413_08_29_SS_Primary_ALS - DI, SX_OB_20220413_16_10_SS_Primary_ALS - DI, SX_OB_20220413_20_16_SS_Primary_ALS - DI, SX_OB_20220414_00_02_SS_Primary_ALS - DI, SX_OB_20220414_03_53_SS_Primary_ALS - DI	18-Apr-2022	22-Apr-2022	15-Oct-2022	✓	22-Apr-2022	15-Oct-2022	✓
<b>EP231D: (n:2) Fluorotelomer Sulfonic Acids</b>								
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220413_16_48_SR_Rinsate_ALS,	SX_OB_20220413_16_49_SB_Blank_ALS	14-Apr-2022	22-Apr-2022	11-Oct-2022	✓	22-Apr-2022	11-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	18-Apr-2022	21-Apr-2022	15-Oct-2022	✓	21-Apr-2022	15-Oct-2022	✓
<b>HDPE (no PTFE) (EP231X)</b> SX_OB_20220413_12_52_SS_Primary_ALS - DI, SX_OB_20220413_16_24_SS_Primary_ALS - DI, SX_OB_20220413_08_15_SS_Primary_ALS - DI, SX_OB_20220413_16_22_SS_Triplicate_ALS - DI, SX_OB_20220413_08_17_SS_Duplicate_ALS - DI,	SX_OB_20220413_08_29_SS_Primary_ALS - DI, SX_OB_20220413_16_10_SS_Primary_ALS - DI, SX_OB_20220413_20_16_SS_Primary_ALS - DI, SX_OB_20220414_00_02_SS_Primary_ALS - DI, SX_OB_20220414_03_53_SS_Primary_ALS - DI	18-Apr-2022	22-Apr-2022	15-Oct-2022	✓	22-Apr-2022	15-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_20220413_16_48_SR_Rinsate_ALS,	SX_OB_20220413_16_49_SB_Blank_ALS	14-Apr-2022	22-Apr-2022	11-Oct-2022	✓	22-Apr-2022	11-Oct-2022	✓	
<b>HDPE (no PTFE) (EP231X)</b>									
SX_OB_20220413_12_52_SS_Primary_ALS, SX_OB_20220413_16_24_SS_Primary_ALS, SX_OB_20220413_08_15_SS_Primary_ALS, SX_OB_20220413_08_17_SS_Duplicate_ALS, SX_OB_20220414_00_02_SS_Primary_ALS,	SX_OB_20220413_08_29_SS_Primary_ALS, SX_OB_20220413_16_10_SS_Primary_ALS, SX_OB_20220413_16_22_SS_Triplicate_ALS, SX_OB_20220413_20_16_SS_Primary_ALS, SX_OB_20220414_03_53_SS_Primary_ALS	18-Apr-2022	21-Apr-2022	15-Oct-2022	✓	21-Apr-2022	15-Oct-2022	✓	
<b>HDPE (no PTFE) (EP231X)</b>									
SX_OB_20220413_12_52_SS_Primary_ALS - DI, SX_OB_20220413_16_24_SS_Primary_ALS - DI, SX_OB_20220413_08_15_SS_Primary_ALS - DI, SX_OB_20220413_16_22_SS_Triplicate_ALS - DI, SX_OB_20220413_08_17_SS_Duplicate_ALS - DI,	SX_OB_20220413_08_29_SS_Primary_ALS - DI, SX_OB_20220413_16_10_SS_Primary_ALS - DI, SX_OB_20220413_20_16_SS_Primary_ALS - DI,  SX_OB_20220414_00_02_SS_Primary_ALS - DI, SX_OB_20220414_03_53_SS_Primary_ALS - DI	18-Apr-2022	22-Apr-2022	15-Oct-2022	✓	22-Apr-2022	15-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	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	1	10	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	10	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	10	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	20	15.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	10	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	10	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
Deionised Water Leach - Plastic Leaching Vessel	EN60-DIa-P	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard





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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
<b>Analytical Methods</b>							
<b>Matrix Spikes (MS)</b>							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	6	55	10.91	10.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Laboratory Control Samples (LCS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	55	5.45	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	55	5.45	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	55	5.45	5.00	✓	NEPM 2013 B3 & ALS QC Standard



## Brief Method Summaries

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

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



Analytical Methods	Method	Matrix	Method Descriptions
Volatile Organic Compounds - Ultra-trace - Summations	EP074-UT-SUM	SOIL	Summation of MAHs and VHCs
Semivolatile Organic Compounds - Waste Classification	EP075-EM	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
SVOC - Waste Classification (Sums)	EP075-EM-SUM	SOIL	Summations for EP075 (EM variation)
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, 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.



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