

TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	F07.0120220518173710_04	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001_01</u>
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1. Motherhub Summary

Source TBM/Bin at Pivot	1	Source Geological Domain	4
Approx. Source Tunnel Chainage From	575	Approx. Source Tunnel Chainage To	575
Approx. Rings From	242	Approx. Rings To	242
Foaming Agent	TamSoil 287AC	Water Source	Potable (City West Water)
For BSF Holding Bay No:	F07.01	Start of Filling From (Time / date)	10/05/2022
Tonnes Put in Holding Bay No:	7324.10	Finish of Filling (Time / Date)	11/05/2022
Classified Volume (LCM)	4000 m ³	Spoil Classification Decision	NPIW Containment
Sampling Ratio (samples per LCM)	1 : 190.48	Approx. Bank Cubic Meters (BCM)	.00

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_20220511_04_14_SS_Primary_EUF	SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_15_45_SS_Primary_EUF
SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220510_20_08_SS_Triplicate_ALS	SX_OB_20220510_12_11_SS_Primary_EUF
SX_OB_20220511_04_04_SS_Primary_EUF	SX_OB_20220510_20_07_SS_Duplicate_EUF	SX_OB_20220510_11_54_SS_Primary_ALS
SX_OB_20220511_00_09_SS_Primary_ALS	SX_OB_20220510_20_05_SS_Primary_EUF	SX_OB_20220510_07_57_SS_Primary_EUF
SX_OB_20220511_00_07_SS_Primary_EUF	SX_OB_20220510_15_55_SS_Primary_ALS	SX_OB_20220510_07_51_SS_Triplicate_EUF
SX_OB_20220511_00_02_SS_Primary_ALS	SX_OB_20220510_15_47_SS_Triplicate_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS
SX_OB_20220510_20_22_SS_Primary_EUF	SX_OB_20220510_15_46_SS_Duplicate_EUF	SX_OB_20220510_07_49_SS_Primary_ALS
Total Sample Numbers	21	Ratio Acceptable
Primary Sample Numbers	15	Yes
Classified Volume (LCM)	4000 m ³	
Volume: Sample Number Ratio (Samples per LCM)	1 : 190.48	

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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 style="text-align: center;">If the answer is Yes, go to E. If the answer is No, go to B.</p>	No
<p>B. If the answer to A is No (i.e., 10 or more Holding Bays of spoil have been tested from this Domain), do trends in the maximum data values from the previous 10 bays indicate that results are trending at <75% of the containment criteria?</p> <p style="text-align: center;">If the answer is Yes, go to C. If the answer is No, go to D.</p>	Yes
<p>C. If the answer to B is Yes, then was testing of spoil for this Holding Bay reduced to two primary samples per bay plus QC samples (Minimum Testing Regime) as allowed by the SAQP (See SAQP Section 6.2.7)?</p>	No
<p>D. If the answer to B is No, then was the default testing regime implemented for all samples collected for the spoil in this Holding Bay (as required by the SAQP)?</p>	NA
<p>E. Based on the answers to Questions A to D above, was the default testing regime (as defined in the SAQP) applied to the spoil in this Holding Bay?</p>	Yes – See section 4
<p>F. Based on the answers to Questions A to D above, was the Minimum testing Regime (as defined in the SAQP) applied to the spoil in this Holding Bay?</p>	No

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3.4 Spoil Compliance with SAQP Criteria for Containment Cell

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

Need for IWRG 621.1 or 655.1 Testing	
A. Is Spoil in this Holding Bay from a Zone of Exception or Anomalous and required testing for IWRG 621.1?	No
B. Is IWRG 621.1 testing required for spoil in this Holding Bay, because prior to this Holding Bay, less than 10 Holding Bays of spoil have been tested from this Domain?	No
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?	Yes
D. Is testing pursuant to IWRG 655.1 required for spoil in this Holding Bay, because the spoil comes from Exception Zone 3 (See SAQP Section 5.4)?	No
E. Has spoil testing for IWRG 621.1 Parameters been triggered by results of spoil water tests for previous Holding Bays of spoil from this geological domain?	No
Outcome from IWRG 621.1 testing (if needed)	
F. If Yes to one or more Questions A, B, C or E, (and not NOC< applicable background concentrations) then do test results for IWRG 621.1 (see Table 3.4-2) prohibit NPIW Containment as a spoil Classification Outcome? If no to all of Questions A, B, C and E, then respond NA to this question.	No
Outcome from IWRG 655.1 testing (if needed)	
G. If Yes to Questions D, then do test results for IWRG 655.1 (see Table 3.4-3) permit NPIW Containment as a spoil Classification Outcome? If no to Question D, respond NA to this question	NA
Outcome from PFAS Testing	
H. Do test results for PFAS (see Table 3.4-4 below) permit NPIW Containment as a spoil Classification Outcome?	Yes
<i>If Yes to either or both of Question E or F, then Spoil is Not Suitable for Containment; Go to Section 3.5. Otherwise, it is Suitable for Containment</i>	
Notes:	
<ol style="list-style-type: none"> 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	21*	15	1: 190.48	21	19	32.67	36.71	55	20	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Copper	mg/kg	5	21*	15	1: 190.48	21	58	82.38	88.27	110	100	NPIW-Containment
Chromium (Hexavalent)	mg/kg	1	21*	15	1: 190.48	1	<1	N/A	N/A	1.1	1	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Nickel	mg/kg	5	21*	15	1: 190.48	21	148	240.1	262.6	350	60	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Zinc	mg/kg	5	21*	15	1: 190.48	21	96	167.4	187.6	280	200	NPIW-Containment
Fluoride	mg/kg	100	21*	15	1: 190.48	20	110	238.5	285.4	890	450	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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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	21*	15	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFOA	ug/kg	5	21*	15	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFHxS	ug/kg	5	21*	15	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
ASLP (pH= 5) PFAS Concentrations											
PFOA	ug/L	0.01	21*	15	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS+PFHxS	ug/L	0.01	21*	15	0	N/A	N/A	N/A	<0.01	7	NPIW-Containment
ASLP (pH= 7) PFAS Concentrations											
PFOA	ug/L	0.01	21*	15	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS+PFHxS	ug/L	0.01	21*	15	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"> 1. Technical discussion around the naturally occurring metal concentrations found in soils beneath the WGTP is detailed in <i>Golder (2017b) – Technical Report B, Appendix E – Environmental characterisation of spoil (natural soil and rock)</i>. The report indicates that elevated metals (including arsenic, nickel, copper, chromium (CrVI), zinc and mercury) were considered to be associated with natural enrichment instead of anthropogenic contamination. <ol style="list-style-type: none"> a. Arsenic – <i>Golder (2017b) – Technical Report B, Appendix E 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"> i. The residual soil of the sub-unit being characterised by iron-oxide staining and containing goethite. Goethite is an iron oxyhydroxide mineral, which can contain elevated concentrations of arsenic. <p>Golder therefore concluded that based on the broad vertical distribution of arsenic and the presence of arsenic throughout the greater project area, arsenic results in Upper Older Volcanics soil are not likely to be associated with anthropogenic contamination.</p> b. Nickel – <i>Golder (2017b) – Technical Report B, Appendix E section 6.3 Nickel enrichment within the upper Older Volcanics</i> found that <ol style="list-style-type: none"> i. Nickel is known to be enriched within olivine and pyroxene basalt minerals, leading to nickel enrichment of soils weathered from basalt (Martini and Chesworth, 2013). ii. The reported mean nickel concentrations within the Older Volcanics (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). 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.

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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) ¹	84	15	<0.5	2.8	0.927	0.7	0.592	3	0.439	1	-	-	-	-	NA	No Data	Potentially
	Copper	101	98	<5	326	63	55	44	15	82.4	100	799	<25	87	<25	Not Exceeding	No Data	No Affect
	Mercury	101	7	<0.1	1.7	0.077	0.05	0.17	1	NA	1	-	-	-	-	NA	No Data	No Affect
	Nickel	101	99	<2	451	127	115	73	88	140.6	60	830	<25	170	28	Exceeding	Natural Origin	No Affect
	Zinc	101	99	<5	483	84	63	79	6	98.7	200	819	<25	190	<25	Not Exceeding	No Data	No Affect

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

- A similar ratio of test results >1mg/kg compared to the overall data set;
 - If a ½ LOR is substituted for results reported as <LOR (of 1mg/kg), then like the AJJV 95% UCL, the calculation is <1mg/kg
- The results also show that there are no synthetic compounds reported above the laboratory LOR, another indication that anthropogenic contamination is not present.

2.	Default testing regime was implemented for all samples collected for the spoil in this holding bay as a determination has not been made regarding the reduced sampling scope.
3.	Test result outcomes can lead to two classification possibilities; however, the classification decision follows the preference of the waste management hierarchy.

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4.	Spoil is not from a “Zone of Exception”. Zone of exception applies a sampling ratio of only Primary Samples to LCM to categorise spoil as per the SAQP revision 5. Sample to categorised volume ratio in zones of exception is to be as per IWRG702 with 1 primary spoil sample categorising a maximum 250 m3 of spoil.
5.	Loose Cubic metres (LCM) to mass (tonnes) conversion ratio used is 1 LCM:1.6 tonnes
6.	This report has been prepared in accordance with industry recognised standards and procedures current at the time of the work. The report presents the results of the assessment based on the quoted scope of works (unless otherwise agreed in writing) for the specific purposes of the engagement by the Client. No warranties expressed or implied, are offered to any third parties and no liability will be accepted for use of this report by third parties.
7.	All information provided by third parties has been assumed to be correct and complete. Agon does not assume any liability for misrepresentation of information by third parties or for matters not visible, accessible or present on the subject site.
8.	Opinions and judgements expressed herein are based on Agon’s understanding of current regulatory standards and should not be construed as legal opinions. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties other than those listed above.
9.	This report should be read in full.

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5. Attachments

ATTACHMENT A: TABULATED RESULTS

ATTACHMENT B: 95% UCL AVE CALCULATIONS

ATTACHMENT C: LABORATORY CERTIFICATES

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ATTACHMENT A: TABULATED RESULTS

							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
EQL							2	0.4	5	5	1	5	0.1	5	5	2	2	10
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	10/05/2022	887299	MGT	Normal		45	<0.4	110	210	<1	<5	<0.1	<5	340	2.1	<2	<10
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF	10/05/2022	887299	MGT	Field_D	M22-My0025026	37	<0.4	90	160	<1	<5	<0.1	<5	300	<2	<2	<10
RPD							20	0	20	27	0	0	0	0	12	5	0	0
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	10/05/2022	887299	MGT	Normal		45	<0.4	110	210	<1	<5	<0.1	<5	340	2.1	<2	<10
F07.01	SX_OB_20220510_15_47_SS_Triplicate_ALS	10/05/2022	EM2208544	ALSE-Melbourne	Interlab_D	M22-My0025026	25	1	70	92	1.1	<5	<0.1	<5	236	<5	<2	<10
RPD							57	86	44	78	10	0	0	0	36	0	0	0
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	10/05/2022	887299	MGT	Normal													
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF	10/05/2022	887299	MGT	Field_D	M22-My0025040												
RPD																		
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	10/05/2022	887299	MGT	Normal													
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF	10/05/2022	887299	MGT	Field_D	M22-My0025052												
RPD																		
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	10/05/2022	887299	MGT	Normal													
F07.01	SX_OB_20220510_15_47_SS_Triplicate_ALS	10/05/2022	EM2208544	ALSE-Melbourne	Interlab_D	M22-My0025052												
RPD																		
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	10/05/2022	887299	MGT	Normal		36	<0.4	81	150	<1	<5	<0.1	<5	270	<2	<2	<10
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF	10/05/2022	887299	MGT	Field_D	M22-My0025028	44	<0.4	93	200	<1	<5	<0.1	<5	290	2.0	<2	<10
RPD							20	0	14	29	0	0	0	0	7	0	0	0
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	10/05/2022	887299	MGT	Normal		36	<0.4	81	150	<1	<5	<0.1	<5	270	<2	<2	<10
F07.01	SX_OB_20220510_20_08_SS_Triplicate_ALS	10/05/2022	EM2208544	ALSE-Melbourne	Interlab_D	M22-My0025028	26	<1	76	144	<1.0	<5	<0.1	<5	259	<5	<2	<10
RPD							32	0	6	4	0	0	0	0	4	0	0	0
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	10/05/2022	887299	MGT	Normal													
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF	10/05/2022	887299	MGT	Field_D	M22-My0025042												
RPD																		
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	10/05/2022	887299	MGT	Normal													
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF	10/05/2022	887299	MGT	Field_D	M22-My0025054												
RPD																		
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	10/05/2022	887299	MGT	Normal													
F07.01	SX_OB_20220510_20_08_SS_Triplicate_ALS	10/05/2022	EM2208544	ALSE-Melbourne	Interlab_D	M22-My0025054												
RPD																		
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS	10/05/2022	EM2208544	ALSE-Melbourne	Normal		22	<1	65	109	<1.0	<5	<0.1	<5	178	<5	<2	<10
F07.01	SX_OB_20220510_07_50_SS_Duplicate_ALS	10/05/2022	EM2208544	ALSE-Melbourne	Field_D	EM2208544001	19	<1	68	90	<1.0	<5	<0.1	<5	161	<5	<2	<10
RPD							15	0	5	19	0	0	0	0	10	0	0	0
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS	10/05/2022	EM2208544	ALSE-Melbourne	Normal		22	<1	65	109	<1.0	<5	<0.1	<5	178	<5	<2	<10
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF	10/05/2022	887299	MGT	Interlab_D	EM2208544001	26	<0.4	85	150	<1	<5	<0.1	<5	240	<2	<2	<10
RPD							17	0	27	32	0	0	0	0	30	0	0	0
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS	10/05/2022	EM2208544	ALSE-Melbourne	Normal		22	<1	65	109	<1.0	<5	<0.1	<5	178	<5	<2	<10
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF	10/05/2022	887299	MGT	Interlab_D	EM2208544001												
RPD																		
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS	10/05/2022	EM2208544	ALSE-Melbourne	Normal													
F07.01	SX_OB_20220510_07_50_SS_Duplicate_ALS	10/05/2022	EM2208544	ALSE-Melbourne	Field_D	EM2208544015												
RPD																		
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS	10/05/2022	EM2208544	ALSE-Melbourne	Normal													
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF	10/05/2022	887299	MGT	Interlab_D	EM2208544015												
RPD																		

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
 **Elevated RPDs are highlighted as per QA/QC 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

		BTEX						TRH						TPH								
	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 Napthalene)	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
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
	0.5	0.1	0.1	0.1	0.1	0.2	0.3	20	20	50	50	100	100	50	20	20	50	50	50	0.05	0.05	0.05

Location Code	Field ID	PAHs	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene Total	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Napthalene)	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
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	<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
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF	<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
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	<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
F07.01	SX_OB_20220510_15_47_SS_Triplicate_ALS		<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
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF																						
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF																						
RPD																							
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF																						
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF																						
RPD																							
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF																						
F07.01	SX_OB_20220510_15_47_SS_Triplicate_ALS																						
RPD																							
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	<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
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF	<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
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	<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
F07.01	SX_OB_20220510_20_08_SS_Triplicate_ALS		<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
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF																						
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF																						
RPD																							
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF																						
F07.01	SX_OB_20220510_20_08_SS_Triplicate_ALS																						
RPD																							
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS		<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
F07.01	SX_OB_20220510_07_50_SS_Duplicate_ALS		<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
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS		<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
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF	<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
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS		<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
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF																						
RPD																							
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS																						
F07.01	SX_OB_20220510_07_50_SS_Duplicate_ALS																						
RPD																							
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS																						
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF																						
RPD																							

*RPDs have only been considered where a concentration is greater than 1 time:
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs)
***Interlab Duplicates are matched on a per compound basis as methods vary

		Phenols																				
EQL	Organochlorine pesticides EPAV/c	Other organochlorine pesticides EPAV/c	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol	4-chloro-3-methylphenol	Pentachlorophenol	2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4,6-Dinitro-2-methylphenol	Tetrachlorophenols	2,3,5,6-Tetrachlorophenol	Cresol Total	4,6-Dinitro-o-cyclohexyl phenol	Phenols (halogenated) EPA V/c	Phenols (non-halogenated) EPAV/c	2,4-Dimethylphenol	2-Methylphenol	2-Nitrophenol	2,4-Dinitrophenol	3&4-Methylphenol (m&p-cresol)
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	0.1	0.03	0.5	0.5	1	1	0.5	1	1	0.05	5	10	0.03	0.5	20	1	20	0.5	0.2	1	5	0.4
Location Code	Field ID																					
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	<0.1	<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
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF	<0.1	<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
RPD		0	0	0	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	<0.1	<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
F07.01	SX_OB_20220510_15_47_SS_Triplicate_ALS	<0.10	<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
RPD		0	0	0	0	0	0	0	0	0	0				0			0	0	0	0	0
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF																					
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF																					
RPD																						
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF																					
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF																					
RPD																						
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF																					
F07.01	SX_OB_20220510_15_47_SS_Triplicate_ALS																					
RPD																						
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	<0.1	<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
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF	<0.1	<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
RPD		0	0	0	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	<0.1	<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
F07.01	SX_OB_20220510_20_08_SS_Triplicate_ALS	<0.10	<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
RPD		0	0	0	0	0	0	0	0	0	0				0			0	0	0	0	0
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF																					
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF																					
RPD																						
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF																					
F07.01	SX_OB_20220510_20_08_SS_Triplicate_ALS																					
RPD																						
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS	<0.10	<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
F07.01	SX_OB_20220510_07_50_SS_Duplicate_ALS	<0.10	<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
RPD		0	0	0	0	0	0	0	0	0	0	0		0	0			0	0	0	0	0
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS	<0.10	<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
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF	<0.1	<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
RPD		0	0	0	0	0	0	0	0	0	0				0			0	0	0	0	0
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS	<0.10	<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
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF																					
RPD																						
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS																					
F07.01	SX_OB_20220510_07_50_SS_Duplicate_ALS																					
RPD																						
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS																					
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF																					
RPD																						

*RPDs have only been considered where a concentration is greater than 1 time:
 **Elevated RPDs are highlighted as per QA/QC Profile settings (Acceptable RPDs)
 ***Interlab Duplicates are matched on a per compound basis as methods vary

		hydrocarbons													NA			PC					
		Dichloromethane	Hexachlorobutadiene	Other chlorinated hydrocarbons EPA Vic	Trichloroethene	Chlorinated hydrocarbons EPA Vic	cis-1,2-dichloroethene	1,1,2-trichloroethane	trans-1,3-dichloropropene	Vinyl chloride	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	trans-1,2-dichloroethene	Tetrachloroethene	Sum of WA DWER PFAS (n=10)*	Moisture Content	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	UG/KG	μg/L	%	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.05		1	0.1	0.1	0.1	0.1
Location Code	Field ID																						
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	
F07.01	SX_OB_20220510_15_47_SS_Triplicate_ALS	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10.0	<0.05	30.4					
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF																<0.05						
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF																<0.05						
RPD																	0						
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF																<0.05						
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF																<0.05						
RPD																	0						
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF																<0.05						
F07.01	SX_OB_20220510_15_47_SS_Triplicate_ALS																<0.05						
RPD																							
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	
F07.01	SX_OB_20220510_20_08_SS_Triplicate_ALS	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10.0	<0.05	36.2					
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF																<0.05						
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF																<0.05						
RPD																	0						
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF																<0.05						
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF																<0.05						
RPD																	0						
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF																<0.05						
F07.01	SX_OB_20220510_20_08_SS_Triplicate_ALS																<0.05						
RPD																							
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10.0	<0.05	29.0					
F07.01	SX_OB_20220510_07_50_SS_Duplicate_ALS	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10.0	<0.05	26.6					
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		9					
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10.0	<0.05	29.0					
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10.0	<0.05	29.0					
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF																<0.05						
RPD																	0						
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS																<0.05						
F07.01	SX_OB_20220510_07_50_SS_Duplicate_ALS																<0.05						
RPD																	0						
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS																<0.05						
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF																<0.05						
RPD																							

*RPDs have only been considered where a concentration is greater than 1 time:
 **Elevated RPDs are highlighted as per QA/QC Profile settings (Acceptable RPDs)
 ***Interlab Duplicates are matched on a per compound basis as methods vary

Bs		Inorganics									Halogenated Benzenes							Halogenated Hydrocarbons				
Arochlor 1221	Arochlor 1260	Arochlor 1016	PCBs (Sum of total)	pH (Final)	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	
mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.1	0.1	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
Location Code	Field ID																					
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	<0.1	<0.1	<0.1	<0.1					8.1	220	28	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF	<0.1	<0.1	<0.1	<0.1					7.7	110	30	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD		0	0	0	0					5	67	7	0	0	0	0	0	0	0	0	0	0
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	<0.1	<0.1	<0.1	<0.1					8.1	220	28	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F07.01	SX_OB_20220510_15_47_SS_Triplicate_ALS				<0.1	5.1	5			150			<5	<0.50	<0.50	<0.50			<0.50			
RPD					0					38			0	0	0	0			0			
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF					5.2	5.1															
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF					5.2	5.1															
RPD					0	0																
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF					8.3	6.9															
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF					8.4	6.9															
RPD					1	0																
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF					8.3	6.9															
F07.01	SX_OB_20220510_15_47_SS_Triplicate_ALS					9.1																
RPD					9																	
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	<0.1	<0.1	<0.1	<0.1					8.2	110	33	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF	<0.1	<0.1	<0.1	<0.1					8.0	470	33	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD		0	0	0	0					2	124	0	0	0	0	0	0	0	0	0	0	0
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	<0.1	<0.1	<0.1	<0.1					8.2	110	33	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F07.01	SX_OB_20220510_20_08_SS_Triplicate_ALS				<0.1	5.1	5			150			<5	<0.50	<0.50	<0.50			<0.50			
RPD					0					31			0	0	0	0			0			
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF					5.2	5.1															
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF					5.2	5.1															
RPD					0	0																
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF					8.0	6.9															
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF					6.6	6.9															
RPD					19	0																
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF					8.0	6.9															
F07.01	SX_OB_20220510_20_08_SS_Triplicate_ALS					9.0																
RPD					12																	
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS				<0.1	5.1	5			130			<5	<0.50	<0.50	<0.50			<0.50			
F07.01	SX_OB_20220510_07_50_SS_Duplicate_ALS				<0.1	5.1	5			120			<5	<0.50	<0.50	<0.50			<0.50			
RPD					0	0	0			8			0	0	0	0			0			
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS				<0.1	5.1	5			130			<5	<0.50	<0.50	<0.50			<0.50			
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF	<0.1	<0.1	<0.1	<0.1	8.1	220	30	<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					51			0	0	0	0			0			
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS				<0.1	5.1	5			130			<5	<0.50	<0.50	<0.50			<0.50			
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF					5.2	5.1															
RPD					2	2																
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS					9.1																
F07.01	SX_OB_20220510_07_50_SS_Duplicate_ALS					9.2																
RPD					1																	
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS					9.1																
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF					8.0	6.9															
RPD					13																	

*RPDs have only been considered where a concentration is greater than 1 time:

**Elevated RPDs are highlighted as per QA/QC Profile settings (Acceptable RPDs)

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

	MAH						Solvents					SPOCAS
	Total MAH	Monocyclic aromatic hydrocarbons EPA/Vic	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl Ketone	pH (CaCl2)
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1

Location Code	Field ID	Total MAH	Monocyclic aromatic hydrocarbons EPA/Vic	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl Ketone	pH (CaCl2)
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF	<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	
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
F07.01	SX_OB_20220510_15_47_SS_Triplicate_ALS		<0.5		<0.5								7.7
RPD					0								
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF												
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF												
RPD													
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF												
F07.01	SX_OB_20220510_15_46_SS_Duplicate_EUF												
RPD													
F07.01	SX_OB_20220510_15_45_SS_Primary_EUF												
F07.01	SX_OB_20220510_15_47_SS_Triplicate_ALS												
RPD													
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF	<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	
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
F07.01	SX_OB_20220510_20_08_SS_Triplicate_ALS		<0.5		<0.5								7.9
RPD					0								
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF												
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF												
RPD													
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF												
F07.01	SX_OB_20220510_20_07_SS_Duplicate_EUF												
RPD													
F07.01	SX_OB_20220510_20_05_SS_Primary_EUF												
F07.01	SX_OB_20220510_20_08_SS_Triplicate_ALS												
RPD													
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS		<0.5		<0.5								7.8
F07.01	SX_OB_20220510_07_50_SS_Duplicate_ALS		<0.5		<0.5								7.8
RPD			0		0								0
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS		<0.5		<0.5								7.8
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
RPD					0								
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS		<0.5		<0.5								7.8
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF												
RPD													
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS												
F07.01	SX_OB_20220510_07_50_SS_Duplicate_ALS												
RPD													
F07.01	SX_OB_20220510_07_49_SS_Primary_ALS												
F07.01	SX_OB_20220510_07_51_SS_Triplicate_EUF												
RPD													

*RPDs have only been considered where a concentration is greater than 1 time:

**Elevated RPDs are highlighted as per QA/QC Profile settings (Acceptable RPDs

***Interlab Duplicates are matched on a per compound basis as methods vary t

TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	F07.0120220518173710_04	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

UCL Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation ProUCL 5.118/05/2022 6:20:35 PM
 From File WorkSheet_b.xls
 Full Precision OFF
 Confidence Coefficient 95%
 Number of Bootstrap Operations 2000

Arsenic

General Statistics

Total Number of Observations	21	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	19	Mean	32.67
Maximum	55	Median	31
SD	10.74	Std. Error of Mean	2.345
Coefficient of Variation	0.329	Skewness	0.715

Normal GOF Test

Shapiro Wilk Test Statistic 0.925
 5% Shapiro Wilk Critical Value 0.908
 Lilliefors Test Statistic 0.144
 5% Lilliefors Critical Value 0.188

Shapiro Wilk GOF Test

Data appear Normal at 5% Significance Level

Lilliefors GOF Test

Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL

95% Student's-t UCL 36.71

95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995) 36.91
 95% Modified-t UCL (Johnson-1978) 36.77

Gamma GOF Test

A-D Test Statistic 0.342
 5% A-D Critical Value 0.743
 K-S Test Statistic 0.122
 5% K-S Critical Value 0.189

Anderson-Darling Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

Kolmogorov-Smirnov Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.24	k star (bias corrected MLE)	8.811
Theta hat (MLE)	3.189	Theta star (bias corrected MLE)	3.707
nu hat (MLE)	430.2	nu star (bias corrected)	370.1
MLE Mean (bias corrected)	32.67	MLE Sd (bias corrected)	11
		Approximate Chi Square Value (0.05)	326.5
Adjusted Level of Significance	0.0383	Adjusted Chi Square Value	323.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50) 37.03

95% Adjusted Gamma UCL (use when n<50) 37.39

Lognormal GOF Test

Shapiro Wilk Test Statistic 0.959
 5% Shapiro Wilk Critical Value 0.908
 Lilliefors Test Statistic 0.104
 5% Lilliefors Critical Value 0.188

Shapiro Wilk Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

Lilliefors Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.944	Mean of logged Data	3.437
Maximum of Logged Data	4.007	SD of logged Data	0.321

Assuming Lognormal Distribution

95% H-UCL	37.37	90% Chebyshev (MVUE) UCL	39.62
95% Chebyshev (MVUE) UCL	42.78	97.5% Chebyshev (MVUE) UCL	47.17
99% Chebyshev (MVUE) UCL	55.78		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	36.52	95% Jackknife UCL	36.71
95% Standard Bootstrap UCL	36.41	95% Bootstrap-t UCL	37.28
95% Hall's Bootstrap UCL	37.24	95% Percentile Bootstrap UCL	36.38
95% BCA Bootstrap UCL	36.76		
90% Chebyshev(Mean, Sd) UCL	39.7	95% Chebyshev(Mean, Sd) UCL	42.89
97.5% Chebyshev(Mean, Sd) UCL	47.31	99% Chebyshev(Mean, Sd) UCL	55.99

Suggested UCL to Use

95% Student's-t UCL	36.71
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Copper

General Statistics

Total Number of Observations	21	Number of Distinct Observations	17
		Number of Missing Observations	0
Minimum	58	Mean	82.38
Maximum	110	Median	82
SD	15.64	Std. Error of Mean	3.414
Coefficient of Variation	0.19	Skewness	0.196

Normal GOF Test

Shapiro Wilk Test Statistic	0.965
5% Shapiro Wilk Critical Value	0.908
Lilliefors Test Statistic	0.0999
5% Lilliefors Critical Value	0.188

Shapiro Wilk GOF Test

Data appear Normal at 5% Significance Level

Lilliefors GOF Test

Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL

95% Student's-t UCL	88.27
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95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995)	88.15
95% Modified-t UCL (Johnson-1978)	88.29

Gamma GOF Test

A-D Test Statistic	0.206
5% A-D Critical Value	0.742
K-S Test Statistic	0.0967
5% K-S Critical Value	0.189

Anderson-Darling Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

Kolmogorov-Smirnov Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	28.89	k star (bias corrected MLE)	24.8
Theta hat (MLE)	2.851	Theta star (bias corrected MLE)	3.322
nu hat (MLE)	1214	nu star (bias corrected)	1042
MLE Mean (bias corrected)	82.38	MLE Sd (bias corrected)	16.54
		Approximate Chi Square Value (0.05)	967.6
Adjusted Level of Significance	0.0383	Adjusted Chi Square Value	962.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	88.67	95% Adjusted Gamma UCL (use when n<50)	89.18
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Lognormal GOF Test

Shapiro Wilk Test Statistic	0.967	Shapiro Wilk Lognormal GOF Test
5% Shapiro Wilk Critical Value	0.908	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0901	Lilliefors Lognormal GOF Test
5% Lilliefors Critical Value	0.188	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	4.06	Mean of logged Data	4.394
Maximum of Logged Data	4.7	SD of logged Data	0.192

Assuming Lognormal Distribution

95% H-UCL	88.97	90% Chebyshev (MVUE) UCL	92.82
95% Chebyshev (MVUE) UCL	97.54	97.5% Chebyshev (MVUE) UCL	104.1
99% Chebyshev (MVUE) UCL	117		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	88	95% Jackknife UCL	88.27
95% Standard Bootstrap UCL	87.91	95% Bootstrap-t UCL	88.09
95% Hall's Bootstrap UCL	88.46	95% Percentile Bootstrap UCL	87.86
95% BCA Bootstrap UCL	87.95		
90% Chebyshev(Mean, Sd) UCL	92.62	95% Chebyshev(Mean, Sd) UCL	97.26
97.5% Chebyshev(Mean, Sd) UCL	103.7	99% Chebyshev(Mean, Sd) UCL	116.3

Suggested UCL to Use

95% Student's-t UCL	88.27
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Nickel

General Statistics

Total Number of Observations	21	Number of Distinct Observations	18
		Number of Missing Observations	0
Minimum	148	Mean	240.1
Maximum	350	Median	240
SD	59.77	Std. Error of Mean	13.04
Coefficient of Variation	0.249	Skewness	0.197

Normal GOF Test

Shapiro Wilk Test Statistic	0.96
5% Shapiro Wilk Critical Value	0.908
Lilliefors Test Statistic	0.12
5% Lilliefors Critical Value	0.188

Shapiro Wilk GOF Test

Data appear Normal at 5% Significance Level

Lilliefors GOF Test

Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level**Assuming Normal Distribution****95% Normal UCL**

95% Student's-t UCL 262.6

95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995) 262.1

95% Modified-t UCL (Johnson-1978) 262.7

Gamma GOF Test

A-D Test Statistic	0.31
5% A-D Critical Value	0.743
K-S Test Statistic	0.126
5% K-S Critical Value	0.189

Anderson-Darling Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

Kolmogorov-Smirnov Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level**Gamma Statistics**

k hat (MLE)	16.61	k star (bias corrected MLE)	14.27
Theta hat (MLE)	14.46	Theta star (bias corrected MLE)	16.83
nu hat (MLE)	697.5	nu star (bias corrected)	599.2
MLE Mean (bias corrected)	240.1	MLE Sd (bias corrected)	63.57
		Approximate Chi Square Value (0.05)	543.4
Adjusted Level of Significance	0.0383	Adjusted Chi Square Value	539.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50) 264.7

95% Adjusted Gamma UCL (use when n<50) 266.7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.959
5% Shapiro Wilk Critical Value	0.908
Lilliefors Test Statistic	0.119
5% Lilliefors Critical Value	0.188

Shapiro Wilk Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

Lilliefors Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level**Lognormal Statistics**

Minimum of Logged Data	4.997	Mean of logged Data	5.451
Maximum of Logged Data	5.858	SD of logged Data	0.255

Assuming Lognormal Distribution

95% H-UCL	266.7
95% Chebyshev (MVUE) UCL	299.2
99% Chebyshev (MVUE) UCL	374.7

90% Chebyshev (MVUE) UCL 280.8

97.5% Chebyshev (MVUE) UCL 324.7

Nonparametric Distribution Free UCL Statistics**Data appear to follow a Discernible Distribution at 5% Significance Level****Nonparametric Distribution Free UCLs**

95% CLT UCL	261.5	95% Jackknife UCL	262.6
95% Standard Bootstrap UCL	261.2	95% Bootstrap-t UCL	264.4
95% Hall's Bootstrap UCL	262.8	95% Percentile Bootstrap UCL	261.3
95% BCA Bootstrap UCL	260.9		
90% Chebyshev(Mean, Sd) UCL	279.2	95% Chebyshev(Mean, Sd) UCL	296.9
97.5% Chebyshev(Mean, Sd) UCL	321.5	99% Chebyshev(Mean, Sd) UCL	369.9

Suggested UCL to Use

95% Student's-t UCL 262.6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Zinc

General Statistics

Total Number of Observations	21	Number of Distinct Observations	19
		Number of Missing Observations	0
Minimum	96	Mean	167.4
Maximum	280	Median	156
SD	53.79	Std. Error of Mean	11.74
Coefficient of Variation	0.321	Skewness	0.498

Normal GOF Test

Shapiro Wilk Test Statistic	0.944
5% Shapiro Wilk Critical Value	0.908
Lilliefors Test Statistic	0.126
5% Lilliefors Critical Value	0.188

Shapiro Wilk GOF Test

Data appear Normal at 5% Significance Level

Lilliefors GOF Test

Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL

95% Student's-t UCL 187.6

95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995) 188.1

95% Modified-t UCL (Johnson-1978) 187.8

Gamma GOF Test

A-D Test Statistic	0.325
5% A-D Critical Value	0.743
K-S Test Statistic	0.0982
5% K-S Critical Value	0.189

Anderson-Darling Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

Kolmogorov-Smirnov Gamma GOF Test

Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.38	k star (bias corrected MLE)	8.925
Theta hat (MLE)	16.13	Theta star (bias corrected MLE)	18.75
nu hat (MLE)	435.8	nu star (bias corrected)	374.9
MLE Mean (bias corrected)	167.4	MLE Sd (bias corrected)	56.03
		Approximate Chi Square Value (0.05)	331
Adjusted Level of Significance	0.0383	Adjusted Chi Square Value	327.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50) 189.6

95% Adjusted Gamma UCL (use when n<50) 191.4

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.96
5% Shapiro Wilk Critical Value	0.908
Lilliefors Test Statistic	0.0959
5% Lilliefors Critical Value	0.188

Shapiro Wilk Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

Lilliefors Lognormal GOF Test

Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	4.564	Mean of logged Data	5.071
Maximum of Logged Data	5.635	SD of logged Data	0.321

Assuming Lognormal Distribution

95% H-UCL	191.6	90% Chebyshev (MVUE) UCL	203.2
95% Chebyshev (MVUE) UCL	219.4	97.5% Chebyshev (MVUE) UCL	241.9
99% Chebyshev (MVUE) UCL	286.1		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	186.7	95% Jackknife UCL	187.6
95% Standard Bootstrap UCL	186.1	95% Bootstrap-t UCL	189.3
95% Hall's Bootstrap UCL	187.9	95% Percentile Bootstrap UCL	186.4
95% BCA Bootstrap UCL	187.6		
90% Chebyshev(Mean, Sd) UCL	202.6	95% Chebyshev(Mean, Sd) UCL	218.5
97.5% Chebyshev(Mean, Sd) UCL	240.7	99% Chebyshev(Mean, Sd) UCL	284.2

Suggested UCL to Use

95% Student's-t UCL	187.6
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Fluoride**General Statistics**

Total Number of Observations	21	Number of Distinct Observations	14
Number of Detects	20	Number of Non-Detects	1
Number of Distinct Detects	13	Number of Distinct Non-Detects	1
Minimum Detect	110	Minimum Non-Detect	100
Maximum Detect	890	Maximum Non-Detect	100
Variance Detects	32898	Percent Non-Detects	4.762%
Mean Detects	238.5	SD Detects	181.4
Median Detects	180	CV Detects	0.76
Skewness Detects	2.779	Kurtosis Detects	8.837
Mean of Logged Detects	5.307	SD of Logged Detects	0.536

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.659
5% Shapiro Wilk Critical Value	0.905
Lilliefors Test Statistic	0.291
5% Lilliefors Critical Value	0.192

Shapiro Wilk GOF Test

Detected Data Not Normal at 5% Significance Level

Lilliefors GOF Test

Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	231.9	KM Standard Error of Mean	39.19
KM SD	175	95% KM (BCA) UCL	301.9
95% KM (t) UCL	299.5	95% KM (Percentile Bootstrap) UCL	301
95% KM (z) UCL	296.4	95% KM Bootstrap t UCL	366.6
90% KM Chebyshev UCL	349.5	95% KM Chebyshev UCL	402.7
97.5% KM Chebyshev UCL	476.6	99% KM Chebyshev UCL	621.8

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.215	Anderson-Darling GOF Test
5% A-D Critical Value	0.747	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.23	Kolmogorov-Smirnov GOF
5% K-S Critical Value	0.195	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.142	k star (bias corrected MLE)	2.704
Theta hat (MLE)	75.9	Theta star (bias corrected MLE)	88.19
nu hat (MLE)	125.7	nu star (bias corrected)	108.2
Mean (detects)	238.5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
 GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
 For such situations, GROS method may yield incorrect values of UCLs and BTVs
 This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	227.1
Maximum	890	Median	170
SD	184.3	CV	0.811
k hat (MLE)	0.98	k star (bias corrected MLE)	0.871
Theta hat (MLE)	231.9	Theta star (bias corrected MLE)	260.7
nu hat (MLE)	41.14	nu star (bias corrected)	36.6
Adjusted Level of Significance (β)	0.0383		
Approximate Chi Square Value (36.60, α)	23.75	Adjusted Chi Square Value (36.60, β)	22.96
95% Gamma Approximate UCL (use when $n \geq 50$)	350	95% Gamma Adjusted UCL (use when $n < 50$)	362.1

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	231.9	SD (KM)	175
Variance (KM)	30634	SE of Mean (KM)	39.19
k hat (KM)	1.756	k star (KM)	1.536
nu hat (KM)	73.73	nu star (KM)	64.53
theta hat (KM)	132.1	theta star (KM)	150.9
80% gamma percentile (KM)	357.9	90% gamma percentile (KM)	480.4
95% gamma percentile (KM)	599.3	99% gamma percentile (KM)	867.2

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (64.53, α)	47.05	Adjusted Chi Square Value (64.53, β)	45.9
95% Gamma Approximate KM-UCL (use when $n \geq 50$)	318.1	95% Gamma Adjusted KM-UCL (use when $n < 50$)	326

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.883	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.905	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.186	Lilliefors GOF Test
5% Lilliefors Critical Value	0.192	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	229.8	Mean in Log Scale	5.246
SD in Original Scale	181.2	SD in Log Scale	0.591
95% t UCL (assumes normality of ROS data)	298	95% Percentile Bootstrap UCL	301.9
95% BCA Bootstrap UCL	325.5	95% Bootstrap t UCL	359.3
95% H-UCL (Log ROS)	297.6		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	5.273	KM Geo Mean	195.1
KM SD (logged)	0.531	95% Critical H Value (KM-Log)	2.017
KM Standard Error of Mean (logged)	0.119	95% H-UCL (KM -Log)	285.4
KM SD (logged)	0.531	95% Critical H Value (KM-Log)	2.017
KM Standard Error of Mean (logged)	0.119		

DL/2 Statistics

DL/2 Normal

Mean in Original Scale	229.5
SD in Original Scale	181.5
95% t UCL (Assumes normality)	297.8

DL/2 Log-Transformed

Mean in Log Scale	5.24
SD in Log Scale	0.604
95% H-Stat UCL	300.5

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL	285.4
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Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006). However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	F07.0120220518173710_04	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001_01</u>
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ATTACHMENT C: LABORATORY CERTIFICATES

Company	AGON Environmental - Tunnel Spoil Testing		Project No	J0927	Project Manager	Craig Trimbur	Sampler(s)	HK - EP Riski Martha - Agon	
Address	Unit H76, 63-65 Turner St, Port Melbourne VIC 3207		Project Name	WGTP-Tunnel Ref: 20220511043744-Eurofin-62	EDD Format	Edat	Handed over by		
Contact Name	Craig Trimbur David Lawson		Analyser Please provide an interim lab report if finished report has not been provided by 14 days from sample receipt. Please provide eSRN along with other sample receipt documentation.	Spot Sample Preparation 100mL Plastic - 125mL Plastic - 200mL Amber Glass - 40mL VOA Vial - 500mL PFAS Beadbe - Jar (Class or HDPE)	PFAS Extended State - 0.1 - 5ug/Lg ASLP PH - PFAS 0.01-0.05 ug/l ASP Request - PFAS 0.00-0.05ug/l	Containers Change container type if not necessary	Required Turnaround Time (TAT) Contact us for more information	Email for Invoice finance@agonenviro.com.au LabReports.TST@agonenviro.com.au	
Phone No	461 490 626 967 (Craig) 461 490 411 004 (David)							Email for Results LabReports.TST@agonenviro.com.au agonenviro@edat.com.au melbourne@results1@wgtp.com.au Amit.Kaur@egle-analyses.com.au	
Special Directions								90mL Plastic 125mL Plastic 200mL Amber Glass 40mL VOA Vial 500mL PFAS Beadbe Jar (Class or HDPE)	<input type="checkbox"/> Overnight (reporting by Stamp) <input type="checkbox"/> Same day <input type="checkbox"/> 2 days <input checked="" type="checkbox"/> 3 days (Completed)
Purchase Order								Sample Comments / Dangerous Goods Hazard Warning	
Client ID No	Agon WGTP TST								
No	Client Sample ID	Sampled Date/Time	Matrix	ASLP PH	ASLP PH	ASLP PH	ASLP PH	ASLP PH	
1	SX_OB_20220510_07_51_SS_Triplicate_EUF	10.05.2022 7:51	S	X	X	X	X	X	
2	SX_OB_20220510_07_57_SS_Primary_EUF	10.05.2022 7:57	S	X	X	X	X	X	
3	SX_OB_20220510_09_11_SR_Rinseate_EUF	10.05.2022 9:11	W			X			
4	SX_OB_20220510_09_12_SS_Blank_EUF	10.05.2022 9:12	W			X			
5	SX_IB_20220510_11_57_SS_Primary_EUF	10.05.2022 11:57	S	X	X	X	X	X	
6	SX_OB_20220510_12_11_SS_Primary_EUF	10.05.2022 12:11	S	X	X	X	X	X	
7	SX_OB_20220510_15_48_SS_Primary_EUF	10.05.2022 15:46	S	X	X	X	X	X	
8	SX_OB_20220510_15_46_SS_Duplicate_EUF	10.05.2022 15:46	S	X	X	X	X	X	
9	SX_OB_20220510_20_06_SS_Primary_EUF	10.05.2022 20:06	S	X	X	X	X	X	
10	SX_OB_20220510_20_07_SS_Duplicate_EUF	10.05.2022 20:07	S	X	X	X	X	X	
11	SX_OB_20220510_20_22_SS_Primary_EUF	10.05.2022 20:22	S	X	X	X	X	X	
12	SX_OB_20220510_20_32_SR_Rinseate_EUF	10.05.2022 20:32	W			X			
13	SX_OB_20220510_20_33_SS_Blank_EUF	10.05.2022 20:33	W			X			
14	SX_OB_20220511_00_07_SS_Primary_EUF	11.05.2022 00:07	S	X	X	X	X	X	
15	SX_OB_20220511_04_04_SS_Primary_EUF	11.05.2022 04:04	S	X	X	X	X	X	
16	SX_OB_20220511_04_14_SS_Primary_EUF	11.05.2022 04:14	S	X	X	X	X	X	
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
Total Counts				12	12	16	12	12	
Method of Shipment	<input checked="" type="checkbox"/> Courier #) <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Postal		Name	Signature		Date	Time		
Received By	Jake		Signature	Martha		Date	Time	Temperature	
Laboratory Use Only	Received By		Signature	Date		Time	Temperature	Report No	

Date/Time: 11/5 11:40
 Chilled: Yes/No
 Temp: 15.9
 Correction: +0.2
 Final Temp: 16.1
 Courier TW
 8872999

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



NATA Accredited
Accreditation Number 1261
Site Number 1254

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

Attention: **David Lawson**

Report **887299-L**
Project name **20220511043744-Eurofin-52**
Project ID **JC0927**
Received Date **May 11, 2022**

Client Sample ID			SX_OB_20220 510_07_51_SS _TriPLICATE_EU F	SX_OB_20220 510_07_57_SS _Primary_EUF	SX_IB_202205 10_11_57_SS _Primary_EUF	SX_OB_20220 510_12_11_SS _Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0
Eurofins Sample No.			M22- My0025036	M22- My0025037	M22- My0025038	M22- My0025039
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{C01}		comment	1.0	1.0	1.0	1.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	5.1	5.1	5.1	5.1
pH (off)	0.1	pH Units	5.2	5.2	5.3	5.2
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	100	101	143	136
13C5-PFPeA (surr.)	1	%	117	123	119	111
13C5-PFHxA (surr.)	1	%	96	128	132	124
13C4-PFHpA (surr.)	1	%	120	118	122	107
13C8-PFOA (surr.)	1	%	106	105	110	102
13C5-PFNA (surr.)	1	%	102	112	120	101
13C6-PFDA (surr.)	1	%	92	20	91	135
13C2-PFUnDA (surr.)	1	%	83	83	97	103
13C2-PFDoDA (surr.)	1	%	73	92	120	102
13C2-PFTeDA (surr.)	1	%	39	50	65	43

Client Sample ID			SX_OB_20220 510_07_51_SS _TriPLICATE_EU F	SX_OB_20220 510_07_57_SS _Primary_EUF	SX_IB_202205 10_11_57_SS _Primary_EUF	SX_OB_20220 510_12_11_SS _Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0
Eurofins Sample No.			M22- My0025036	M22- My0025037	M22- My0025038	M22- My0025039
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	63	72	92	96
D3-N-MeFOSA (surr.)	1	%	52	50	70	67
D5-N-EtFOSA (surr.)	1	%	45	43	58	54
D7-N-MeFOSE (surr.)	1	%	47	55	70	61
D9-N-EtFOSE (surr.)	1	%	52	49	62	63
D5-N-EtFOSAA (surr.)	1	%	83	108	71	89
D3-N-MeFOSAA (surr.)	1	%	21	177	80	76
Perfluoroalkyl sulfonic acids (PFSA)						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	84	142	144	136
18O2-PFHxS (surr.)	1	%	92	74	89	81
13C8-PFOS (surr.)	1	%	79	94	100	92
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	104	94	96	83
13C2-6:2 FTSA (surr.)	1	%	88	108	104	93
13C2-8:2 FTSA (surr.)	1	%	74	87	92	93
13C2-10:2 FTSA (surr.)	1	%	61	81	89	80
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_OB_20220 510_15_45_SS _Primary_EUF	SX_OB_20220 510_15_46_SS _Duplicate_EU F	SX_OB_20220 510_20_05_SS _Primary_EUF	SX_OB_20220 510_20_07_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- My0025040	M22- My0025041	M22- My0025042	M22- My0025043
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{C01}		comment	1.0	1.0	1.0	1.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	5.1	5.1	5.1	5.1
pH (off)	0.1	pH Units	5.2	5.2	5.2	5.2
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTTeDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	96	123	138	89
13C5-PFPeA (surr.)	1	%	116	127	115	85
13C5-PFHxA (surr.)	1	%	130	85	129	91
13C4-PFHpA (surr.)	1	%	120	145	144	88
13C8-PFOA (surr.)	1	%	108	120	138	94
13C5-PFNA (surr.)	1	%	98	115	123	78
13C6-PFDA (surr.)	1	%	116	143	137	83
13C2-PFUnDA (surr.)	1	%	92	103	104	67
13C2-PFDoDA (surr.)	1	%	112	121	131	75
13C2-PFTTeDA (surr.)	1	%	56	65	87	46
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	91	85	105	65
D3-N-MeFOSA (surr.)	1	%	68	57	38	41
D5-N-EtFOSA (surr.)	1	%	58	43	33	41
D7-N-MeFOSE (surr.)	1	%	82	72	83	50
D9-N-EtFOSE (surr.)	1	%	68	60	66	44
D5-N-EtFOSAA (surr.)	1	%	116	102	60	51
D3-N-MeFOSAA (surr.)	1	%	151	117	103	78

Client Sample ID			SX_OB_20220 510_15_45_SS _Primary_EUF	SX_OB_20220 510_15_46_SS _Duplicate_EU F	SX_OB_20220 510_20_05_SS _Primary_EUF	SX_OB_20220 510_20_07_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- My0025040	M22- My0025041	M22- My0025042	M22- My0025043
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFASs)						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	139	79	115	91
18O2-PFHxS (surr.)	1	%	97	98	134	57
13C8-PFOS (surr.)	1	%	105	114	123	84
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	82	133	114	69
13C2-6:2 FTSA (surr.)	1	%	98	140	115	63
13C2-8:2 FTSA (surr.)	1	%	98	102	107	63
13C2-10:2 FTSA (surr.)	1	%	75	108	94	54
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_OB_20220 510_20_22_SS _Primary_EUF	SX_OB_20220 511_00_07_SS _Primary_EUF	SX_OB_20220 511_04_04_SS _Primary_EUF	SX_OB_20220 511_04_14_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- My0025044	M22- My0025045	M22- My0025046	M22- My0025047
Date Sampled			May 10, 2022	May 11, 2022	May 11, 2022	May 11, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{C01}		comment	1.0	1.0	1.0	1.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	5.1	5.1	5.1	5.1
pH (off)	0.1	pH Units	5.3	5.3	5.3	5.3

Client Sample ID			SX_OB_20220 510_20_22_SS _Primary_EUF	SX_OB_20220 511_00_07_SS _Primary_EUF	SX_OB_20220 511_04_04_SS _Primary_EUF	SX_OB_20220 511_04_14_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- My0025044	M22- My0025045	M22- My0025046	M22- My0025047
Date Sampled			May 10, 2022	May 11, 2022	May 11, 2022	May 11, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	88	101	99	92
13C5-PFPeA (surr.)	1	%	77	98	79	75
13C5-PFHxA (surr.)	1	%	83	64	77	77
13C4-PFHpA (surr.)	1	%	90	84	100	96
13C8-PFOA (surr.)	1	%	92	89	80	84
13C5-PFNA (surr.)	1	%	84	85	98	87
13C6-PFDA (surr.)	1	%	93	82	93	88
13C2-PFUnDA (surr.)	1	%	78	70	66	77
13C2-PFDoDA (surr.)	1	%	96	82	69	81
13C2-PFTeDA (surr.)	1	%	87	71	46	56
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	63	91	70	63
D3-N-MeFOSA (surr.)	1	%	51	154	35	47
D5-N-EtFOSA (surr.)	1	%	46	173	30	44
D7-N-MeFOSE (surr.)	1	%	60	102	51	61
D9-N-EtFOSE (surr.)	1	%	51	90	49	45
D5-N-EtFOSAA (surr.)	1	%	48	76	57	68
D3-N-MeFOSAA (surr.)	1	%	72	82	25	103
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoronanesulfonic acid (PFNS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			SX_OB_20220 510_20_22_SS _Primary_EUF	SX_OB_20220 511_00_07_SS _Primary_EUF	SX_OB_20220 511_04_04_SS _Primary_EUF	SX_OB_20220 511_04_14_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- My0025044	M22- My0025045	M22- My0025046	M22- My0025047
Date Sampled			May 10, 2022	May 11, 2022	May 11, 2022	May 11, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFASs)						
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	80	92	67	67
18O2-PFHxS (surr.)	1	%	77	62	70	92
13C8-PFOS (surr.)	1	%	76	85	78	92
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	71	56	81	75
13C2-6:2 FTSA (surr.)	1	%	72	68	80	61
13C2-8:2 FTSA (surr.)	1	%	66	83	72	60
13C2-10:2 FTSA (surr.)	1	%	62	82	48	63
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_OB_20220 510_07_51_SS _Triple_EUF	SX_OB_20220 510_07_57_SS _Primary_EUF	SX_IB_202205 10_11_57_SS _Primary_EUF	SX_OB_20220 510_12_11_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- My0025048	M22- My0025049	M22- My0025050	M22- My0025051
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{C01}		comment	4.0	4.0	4.0	4.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	6.9	6.9	6.9	6.9
pH (off)	0.1	pH Units	8.0	8.2	9.1	8.7
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			SX_OB_20220 510_07_51_SS _TriPLICATE_EU F	SX_OB_20220 510_07_57_SS _Primary_EUF	SX_IB_202205 10_11_57_SS _Primary_EUF	SX_OB_20220 510_12_11_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- My0025048	M22- My0025049	M22- My0025050	M22- My0025051
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	99	92	84	88
13C5-PFPeA (surr.)	1	%	93	82	76	85
13C5-PFHxA (surr.)	1	%	104	98	89	85
13C4-PFHpA (surr.)	1	%	111	86	84	84
13C8-PFOA (surr.)	1	%	110	76	63	77
13C5-PFNA (surr.)	1	%	97	70	81	76
13C6-PFDA (surr.)	1	%	112	89	56	85
13C2-PFUnDA (surr.)	1	%	108	63	61	81
13C2-PFDoDA (surr.)	1	%	128	64	68	85
13C2-PFTeDA (surr.)	1	%	61	28	40	53
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	94	59	61	70
D3-N-MeFOSA (surr.)	1	%	24	11	23	36
D5-N-EtFOSA (surr.)	1	%	21	19	17	29
D7-N-MeFOSE (surr.)	1	%	73	23	34	46
D9-N-EtFOSE (surr.)	1	%	58	19	27	35
D5-N-EtFOSAA (surr.)	1	%	141	86	64	89
D3-N-MeFOSAA (surr.)	1	%	114	74	74	94
Perfluoroalkyl sulfonic acids (PFSA)						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	98	110	115	88
18O2-PFHxS (surr.)	1	%	119	70	66	75
13C8-PFOS (surr.)	1	%	107	73	69	82

Client Sample ID			SX_OB_20220 510_07_51_SS _TriPLICATE_EU F	SX_OB_20220 510_07_57_SS _Primary_EUF	SX_IB_202205 10_11_57_SS _Primary_EUF	SX_OB_20220 510_12_11_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- My0025048	M22- My0025049	M22- My0025050	M22- My0025051
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	76	57	61	59
13C2-6:2 FTSA (surr.)	1	%	77	44	60	75
13C2-8:2 FTSA (surr.)	1	%	84	61	55	57
13C2-10:2 FTSA (surr.)	1	%	71	44	42	54
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_OB_20220 510_15_45_SS _Primary_EUF	SX_OB_20220 510_15_46_SS _Duplicate_EU F	SX_OB_20220 510_20_05_SS _Primary_EUF	SX_OB_20220 510_20_07_SS _Duplicate_EU F
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0025052	M22- My0025053	M22- My0025054	M22- My0025055
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{C01}		comment	4.0	4.0	4.0	4.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	6.9	6.9	6.9	6.9
pH (off)	0.1	pH Units	8.3	8.4	8.0	6.6
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	72	78	66	117

Client Sample ID			SX_OB_20220 510_15_45_SS _Primary_EUF	SX_OB_20220 510_15_46_SS _Duplicate_EU F	SX_OB_20220 510_20_05_SS _Primary_EUF	SX_OB_20220 510_20_07_SS _Duplicate_EU F
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0025052	M22- My0025053	M22- My0025054	M22- My0025055
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C5-PFPeA (surr.)	1	%	65	69	64	120
13C5-PFHxA (surr.)	1	%	75	73	74	134
13C4-PFHpA (surr.)	1	%	75	72	84	121
13C8-PFOA (surr.)	1	%	71	65	93	106
13C5-PFNA (surr.)	1	%	68	60	81	84
13C6-PFDA (surr.)	1	%	98	76	78	83
13C2-PFUnDA (surr.)	1	%	65	56	87	67
13C2-PFDoDA (surr.)	1	%	72	58	100	64
13C2-PFTeDA (surr.)	1	%	48	49	75	40
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	59	63	69	64
D3-N-MeFOSA (surr.)	1	%	30	47	20	32
D5-N-EtFOSA (surr.)	1	%	23	39	17	25
D7-N-MeFOSE (surr.)	1	%	46	42	58	80
D9-N-EtFOSE (surr.)	1	%	38	36	45	35
D5-N-EtFOSAA (surr.)	1	%	77	50	67	72
D3-N-MeFOSAA (surr.)	1	%	48	46	107	97
Perfluoroalkyl sulfonic acids (PFSAAs)						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	75	74	92	106
18O2-PFHxS (surr.)	1	%	63	68	91	86
13C8-PFOS (surr.)	1	%	63	60	82	87

Client Sample ID			SX_OB_20220 510_15_45_SS _Primary_EUF	SX_OB_20220 510_15_46_SS _Duplicate_EU F	SX_OB_20220 510_20_05_SS _Primary_EUF	SX_OB_20220 510_20_07_SS _Duplicate_EU F
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0025052	M22- My0025053	M22- My0025054	M22- My0025055
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	58	58	59	125
13C2-6:2 FTSA (surr.)	1	%	55	61	61	122
13C2-8:2 FTSA (surr.)	1	%	64	50	68	57
13C2-10:2 FTSA (surr.)	1	%	48	49	61	53
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_OB_20220 510_20_22_SS _Primary_EUF	SX_OB_20220 511_00_07_SS _Primary_EUF	SX_OB_20220 511_04_04_SS _Primary_EUF	SX_OB_20220 511_04_14_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- My0025056	M22- My0025057	M22- My0025058	M22- My0025059
Date Sampled			May 10, 2022	May 11, 2022	May 11, 2022	May 11, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{C01}		comment	4.0	4.0	4.0	4.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	6.9	6.9	6.9	6.9
pH (off)	0.1	pH Units	7.3	7.8	7.8	8.2
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	85	83	65	96

Client Sample ID			SX_OB_20220 510_20_22_SS _Primary_EUF	SX_OB_20220 511_00_07_SS _Primary_EUF	SX_OB_20220 511_04_04_SS _Primary_EUF	SX_OB_20220 511_04_14_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- My0025056	M22- My0025057	M22- My0025058	M22- My0025059
Date Sampled			May 10, 2022	May 11, 2022	May 11, 2022	May 11, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C5-PFPeA (surr.)	1	%	80	69	60	82
13C5-PFHxA (surr.)	1	%	81	80	63	84
13C4-PFHpA (surr.)	1	%	78	81	69	93
13C8-PFOA (surr.)	1	%	73	65	51	77
13C5-PFNA (surr.)	1	%	38	76	64	93
13C6-PFDA (surr.)	1	%	86	73	66	82
13C2-PFUnDA (surr.)	1	%	74	81	61	83
13C2-PFDoDA (surr.)	1	%	65	94	68	91
13C2-PFTeDA (surr.)	1	%	34	63	47	63
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	74	80	59	77
D3-N-MeFOSA (surr.)	1	%	37	43	30	14
D5-N-EtFOSA (surr.)	1	%	30	35	25	10
D7-N-MeFOSE (surr.)	1	%	50	56	53	41
D9-N-EtFOSE (surr.)	1	%	44	47	45	36
D5-N-EtFOSAA (surr.)	1	%	77	23	91	79
D3-N-MeFOSAA (surr.)	1	%	82	106	78	119
Perfluoroalkyl sulfonic acids (PFSA)						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	81	58	65	74
18O2-PFHxS (surr.)	1	%	79	57	60	83
13C8-PFOS (surr.)	1	%	77	89	63	91

Client Sample ID			SX_OB_20220 510_20_22_SS _Primary_EUF	SX_OB_20220 511_00_07_SS _Primary_EUF	SX_OB_20220 511_04_04_SS _Primary_EUF	SX_OB_20220 511_04_14_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- My0025056	M22- My0025057	M22- My0025058	M22- My0025059
Date Sampled			May 10, 2022	May 11, 2022	May 11, 2022	May 11, 2022
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	60	70	54	80
13C2-6:2 FTSA (surr.)	1	%	47	68	45	93
13C2-8:2 FTSA (surr.)	1	%	63	61	50	74
13C2-10:2 FTSA (surr.)	1	%	38	62	50	61
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
AUS Leaching Procedure			
pH (initial) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	May 11, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	May 11, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	May 11, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 14, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 14, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 14, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 14, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 11, 2022	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 11, 2022 11:40 AM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	887299	Due:	May 18, 2022
Project Name:	20220511043744-Eurofin-52	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_OB_20220510_07_51_S_S_Triplicate_EUF	May 10, 2022	7:51AM	Soil	M22-My0025020		X	X	X
2	SX_OB_20220510_07_57_S_S_Primary_EUF	May 10, 2022	7:57AM	Soil	M22-My0025021		X	X	X
3	SX_OB_20220510_09_11_S_R_Rinsate_EUF	May 10, 2022	9:11AM	Water	M22-My0025022			X	

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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
4	SX_OB_20220510_09_12_S B_Blank_EUF	May 10, 2022	9:12AM	Water	M22-My0025023			X	
5	SX_IB_20220510_11_57_SS_Primary_EUF	May 10, 2022	11:57AM	Soil	M22-My0025024		X	X	X
6	SX_OB_20220510_12_11_S_S_Primary_EUF	May 10, 2022	12:11PM	Soil	M22-My0025025		X	X	X
7	SX_OB_20220510_15_45_S_S_Primary_EUF	May 10, 2022	3:45PM	Soil	M22-My0025026		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
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									
8	SX_OB_20220510_15_46_S_S_Duplicate_EUF	May 10, 2022	3:46PM	Soil	M22-My0025027		X	X	X
9	SX_OB_20220510_20_05_S_S_Primary_EUF	May 10, 2022	8:05PM	Soil	M22-My0025028		X	X	X
10	SX_OB_20220510_20_07_S_S_Duplicate_EUF	May 10, 2022	8:07PM	Soil	M22-My0025029		X	X	X
11	SX_OB_20220510_20_22_S	May 10, 2022	8:22PM	Soil	M22-My0025030		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
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									
	S_Primary_EU F								
12	SX_OB_20220 510_20_32_S R_Rinsate_EU F	May 10, 2022	8:32PM	Water	M22- My0025031			X	
13	SX_OB_20220 510_20_33_S B_Blank_EUF	May 10, 2022	8:33PM	Water	M22- My0025032			X	
14	SX_OB_20220 511_00_07_S S_Primary_EU F	May 11, 2022	12:07AM	Soil	M22- My0025033		X	X	X
15	SX_OB_20220	May 11, 2022	4:04AM	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
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									
15	SX_OB_20220511_04_04_S_S_Primary_EU_F	May 11, 2022	4:04AM	Soil	M22-My0025034				
16	SX_OB_20220511_04_14_S_S_Primary_EU_F	May 11, 2022	4:14AM	Soil	M22-My0025035		X	X	X
17	SX_OB_20220510_07_51_S_S_Triplicate_EUF	May 10, 2022	7:51AM	AUS Leachate - pH 5.0	M22-My0025036	X		X	
18	SX_OB_20220510_07_57_S	May 10, 2022	7:57AM	AUS Leachate - pH 5.0	M22-My0025037	X		X	

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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	S_Primary_EU F								
19	SX_IB_202205 10_11_57_SS _Primary_EUF	May 10, 2022	11:57AM	AUS Leachate - pH 5.0	M22- My0025038	X		X	
20	SX_OB_20220 510_12_11_S S_Primary_EU F	May 10, 2022	12:11PM	AUS Leachate - pH 5.0	M22- My0025039	X		X	
21	SX_OB_20220 510_15_45_S S_Primary_EU F	May 10, 2022	3:45PM	AUS Leachate - pH 5.0	M22- My0025040	X		X	
22	SX_OB_20220	May 10, 2022	3:46PM	AUS Leachate	M22-	X		X	

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

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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									
22	SX_OB_20220510_15_46_S_S_Duplicate_EUF	May 10, 2022	3:46PM	AUS Leachate - pH 5.0	M22-My0025041				
23	SX_OB_20220510_20_05_S_S_Primary_EUF	May 10, 2022	8:05PM	AUS Leachate - pH 5.0	M22-My0025042	X		X	
24	SX_OB_20220510_20_07_S_S_Duplicate_EUF	May 10, 2022	8:07PM	AUS Leachate - pH 5.0	M22-My0025043	X		X	
25	SX_OB_20220510_20_22_S	May 10, 2022	8:22PM	AUS Leachate - pH 5.0	M22-My0025044	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									
	S_Primary_EU F								
26	SX_OB_20220 511_00_07_S S_Primary_EU F	May 11, 2022	12:07AM	AUS Leachate - pH 5.0	M22- My0025045	X		X	
27	SX_OB_20220 511_04_04_S S_Primary_EU F	May 11, 2022	4:04AM	AUS Leachate - pH 5.0	M22- My0025046	X		X	
28	SX_OB_20220 511_04_14_S S_Primary_EU F	May 11, 2022	4:14AM	AUS Leachate - pH 5.0	M22- My0025047	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									
29	SX_OB_20220510_07_51_S_S_Triplicate_EUF	May 10, 2022	7:51AM	AUS Leachate - Reagent Water	M22-My0025048	X		X	
30	SX_OB_20220510_07_57_S_S_Primary_EUF	May 10, 2022	7:57AM	AUS Leachate - Reagent Water	M22-My0025049	X		X	
31	SX_IB_20220510_11_57_SS_Primary_EUF	May 10, 2022	11:57AM	AUS Leachate - Reagent Water	M22-My0025050	X		X	
32	SX_OB_20220510_12_11_S_S_Primary_EUF	May 10, 2022	12:11PM	AUS Leachate - Reagent Water	M22-My0025051	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								
33	SX_OB_20220510_15_45_S_S_Primary_EU_F	May 10, 2022	3:45PM	AUS Leachate - Reagent Water	M22-My0025052	X		X	
34	SX_OB_20220510_15_46_S_S_Duplicate_EU_F	May 10, 2022	3:46PM	AUS Leachate - Reagent Water	M22-My0025053	X		X	
35	SX_OB_20220510_20_05_S_S_Primary_EU_F	May 10, 2022	8:05PM	AUS Leachate - Reagent Water	M22-My0025054	X		X	
36	SX_OB_20220510_20_05_S_S_Primary_EU_F	May 10, 2022	8:07PM	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
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									
36	SX_OB_20220510_20_07_S_S_Duplicate_EUF	May 10, 2022	8:07PM	AUS Leachate - Reagent Water	M22-My0025055				
37	SX_OB_20220510_20_22_S_S_Primary_EUF	May 10, 2022	8:22PM	AUS Leachate - Reagent Water	M22-My0025056	X		X	
38	SX_OB_20220511_00_07_S_S_Primary_EUF	May 11, 2022	12:07AM	AUS Leachate - Reagent Water	M22-My0025057	X		X	
39	SX_OB_20220511_04_04_S	May 11, 2022	4:04AM	AUS Leachate - Reagent	M22-My0025058	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									
	S_Primary_EU F			Water					
40	SX_OB_20220 511_04_14_S S_Primary_EU F	May 11, 2022	4:14AM	AUS Leachate - Reagent Water	M22- My0025059	X		X	
Test Counts						24	12	40	12

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05		0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01		0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01		0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01		0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01		0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01		0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01		0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01		0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01		0.01	Pass	
Perfluorotridecanoic acid (PFTTrDA)	ug/L	< 0.01		0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01		0.01	Pass	
Method Blank						
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05		0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05		0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05		0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	< 0.05		0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05		0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05		0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05		0.05	Pass	
Method Blank						
Perfluoroalkyl sulfonic acids (PFASs)						
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01		0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01		0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01		0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01		0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01		0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01		0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01		0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01		0.01	Pass	
Method Blank						
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01		0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05		0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01		0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01		0.01	Pass	
LCS - % Recovery						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	%	145		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	119		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	114		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	115		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	115		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	104		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	133		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	128		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	130		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	120		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	95		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code		
LCS - % Recovery									
Perfluoroalkyl sulfonamido substances									
Perfluorooctane sulfonamide (FOSA)	%	105			50-150	Pass			
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	129			50-150	Pass			
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	77			50-150	Pass			
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	114			50-150	Pass			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	116			50-150	Pass			
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	141			50-150	Pass			
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	103			50-150	Pass			
LCS - % Recovery									
Perfluoroalkyl sulfonic acids (PFSA)									
Perfluorobutanesulfonic acid (PFBS)	%	99			50-150	Pass			
Perfluorononanesulfonic acid (PFNS)	%	106			50-150	Pass			
Perfluoropropanesulfonic acid (PFPrS)	%	142			50-150	Pass			
Perfluoropentanesulfonic acid (PFPeS)	%	119			50-150	Pass			
Perfluorohexanesulfonic acid (PFHxS)	%	112			50-150	Pass			
Perfluoroheptanesulfonic acid (PFHpS)	%	100			50-150	Pass			
Perfluorooctanesulfonic acid (PFOS)	%	116			50-150	Pass			
Perfluorodecanesulfonic acid (PFDS)	%	95			50-150	Pass			
LCS - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	135			50-150	Pass			
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	134			50-150	Pass			
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	112			50-150	Pass			
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	115			50-150	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)									
				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M22-My0022585	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances									
				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M22-My0022585	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0022585	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0022585	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0022585	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0022585	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-My0022585	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0022585	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-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-My0022585	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-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0022585	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0022585	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass

Comments
Sample Integrity

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

Qualifier Codes/Comments

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

Authorised by:

Michael Cassidy	Analytical Services Manager
Carroll Lee	Senior Analyst-PFAS
Joseph Edouard	Senior Analyst-PFAS
Mary Makarios	Senior Analyst-Sample Properties



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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Agon Environmental Pty Ltd - VIC
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SA 5063



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Attention: **David Lawson**

Report **887299-S**
Project name **20220511043744-Eurofin-52**
Project ID **JC0927**
Received Date **May 11, 2022**

Client Sample ID			SX_OB_20220 510_07_51_SS _TriPLICATE_EU F	SX_OB_20220 510_07_57_SS _Primary_EUF	SX_IB_202205 10_11_57_SS _Primary_EUF	SX_OB_20220 510_12_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025020	M22- My0025021	M22- My0025024	M22- My0025025
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Volatile Organics						
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SX_OB_20220 510_07_51_SS _TriPLICATE_EU F	SX_OB_20220 510_07_57_SS _Primary_EUF	SX_IB_202205 10_11_57_SS _Primary_EUF	SX_OB_20220 510_12_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025020	M22- My0025021	M22- My0025024	M22- My0025025
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	52	65	130	61
Toluene-d8 (surr.)	1	%	52	54	126	55
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SX_OB_20220 510_07_51_SS _TriPLICATE_EU F	SX_OB_20220 510_07_57_SS _Primary_EUF	SX_IB_202205 10_11_57_SS _Primary_EUF	SX_OB_20220 510_12_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025020	M22- My0025021	M22- My0025024	M22- My0025025
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	72	67	64	75
p-Terphenyl-d14 (surr.)	1	%	139	98	107	81
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	64	63	53	89
Tetrachloro-m-xylene (surr.)	1	%	68	73	78	106

Client Sample ID			SX_OB_20220 510_07_51_SS _TriPLICATE_EU F	SX_OB_20220 510_07_57_SS _Primary_EUF	SX_IB_202205 10_11_57_SS _Primary_EUF	SX_OB_20220 510_12_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025020	M22- My0025021	M22- My0025024	M22- My0025025
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	64	63	53	89
Tetrachloro-m-xylene (surr.)	1	%	68	73	78	106
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	77	100	89	104
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Chromium (hexavalent)						
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
Cyanide (total)						
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
Fluoride (Total)						
Fluoride (Total)	100	mg/kg	220	420	220	250
pH (1:5 Aqueous extract at 25°C as rec.)						
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.1	7.5	9.3	6.7
% Moisture						
% Moisture	1	%	30	34	31	28
Heavy Metals						
Arsenic	2	mg/kg	26	31	45	27
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	150	180	160	150
Copper	5	mg/kg	85	94	94	90
Lead	5	mg/kg	< 5	< 5	7.6	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_OB_20220 510_07_51_SS _TriPLICATE_EU F	SX_OB_20220 510_07_57_SS _Primary_EUF	SX_IB_202205 10_11_57_SS _Primary_EUF	SX_OB_20220 510_12_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025020	M22- My0025021	M22- My0025024	M22- My0025025
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Heavy Metals						
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	240	310	250	240
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	160	200	180	150
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	93	93	95	94
13C5-PFPeA (surr.)	1	%	86	90	97	88
13C5-PFHxA (surr.)	1	%	91	92	95	91
13C4-PFHpA (surr.)	1	%	91	92	93	94
13C8-PFOA (surr.)	1	%	113	99	109	106
13C5-PFNA (surr.)	1	%	76	78	72	77
13C6-PFDA (surr.)	1	%	31	67	81	89
13C2-PFUnDA (surr.)	1	%	99	88	96	139
13C2-PFDoDA (surr.)	1	%	88	76	84	85
13C2-PFTeDA (surr.)	1	%	92	92	100	98
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	99	89	100	106
D3-N-MeFOSA (surr.)	1	%	93	82	80	38
D5-N-EtFOSA (surr.)	1	%	91	89	94	103
D7-N-MeFOSE (surr.)	1	%	77	79	90	66
D9-N-EtFOSE (surr.)	1	%	96	102	105	99
D5-N-EtFOSAA (surr.)	1	%	66	90	88	73
D3-N-MeFOSAA (surr.)	1	%	116	103	150	108

Client Sample ID			SX_OB_20220 510_07_51_SS _TriPLICATE_EU F	SX_OB_20220 510_07_57_SS _Primary_EUF	SX_IB_202205 10_11_57_SS _Primary_EUF	SX_OB_20220 510_12_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025020	M22- My0025021	M22- My0025024	M22- My0025025
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFASs)						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	78	81	82	70
18O2-PFHxS (surr.)	1	%	93	91	101	112
13C8-PFOS (surr.)	1	%	99	102	78	80
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	72	75	76	77
13C2-6:2 FTSA (surr.)	1	%	85	90	113	95
13C2-8:2 FTSA (surr.)	1	%	124	96	107	106
13C2-10:2 FTSA (surr.)	1	%	80	47	97	120
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

Client Sample ID			SX_OB_20220 510_15_45_SS _Primary_EUF	SX_OB_20220 510_15_46_SS _Duplicate_EU F	SX_OB_20220 510_20_05_SS _Primary_EUF	SX_OB_20220 510_20_07_SS _Duplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025026	M22- My0025027	M22- My0025028	M22- My0025029
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20

Client Sample ID			SX_OB_20220 510_15_45_SS _Primary_EUF	SX_OB_20220 510_15_46_SS _Duplicate_EU F	SX_OB_20220 510_20_05_SS _Primary_EUF	SX_OB_20220 510_20_07_SS _Duplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025026	M22- My0025027	M22- My0025028	M22- My0025029
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Volatile Organics						
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SX_OB_20220 510_15_45_SS _Primary_EUF	SX_OB_20220 510_15_46_SS _Duplicate_EU F	SX_OB_20220 510_20_05_SS _Primary_EUF	SX_OB_20220 510_20_07_SS _Duplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025026	M22- My0025027	M22- My0025028	M22- My0025029
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Volatiles Organics						
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	101	109	65
Toluene-d8 (surr.)	1	%	54	102	108	53
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	101	86	89	128
p-Terphenyl-d14 (surr.)	1	%	100	125	108	127

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025026	M22- My0025027	M22- My0025028	M22- My0025029
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	104	69	82	100
Tetrachloro-m-xylene (surr.)	1	%	81	88	96	144
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	104	69	82	100
Tetrachloro-m-xylene (surr.)	1	%	81	88	96	144
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025026	M22- My0025027	M22- My0025028	M22- My0025029
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	147	98	123	39
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Chromium (hexavalent)						
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
Cyanide (total)						
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
Fluoride (Total)						
Fluoride (Total)	100	mg/kg	220	110	110	470
pH (1:5 Aqueous extract at 25°C as rec.)						
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.1	7.7	8.2	8.0
% Moisture						
% Moisture	1	%	28	30	33	33
Heavy Metals						
Arsenic	2	mg/kg	45	37	36	44
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	210	160	150	200
Copper	5	mg/kg	110	90	81	93
Lead	5	mg/kg	< 5	< 5	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	340	300	270	290
Selenium	2	mg/kg	2.1	< 2	< 2	2.0
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	240	190	220	200
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTTrDA) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	85	93	93	101
13C5-PFPeA (surr.)	1	%	85	93	89	96
13C5-PFHxA (surr.)	1	%	80	89	91	97

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025026	M22- My0025027	M22- My0025028	M22- My0025029
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	82	94	91	96
13C8-PFOA (surr.)	1	%	99	94	102	105
13C5-PFNA (surr.)	1	%	87	81	81	99
13C6-PFDA (surr.)	1	%	87	89	84	95
13C2-PFUnDA (surr.)	1	%	114	93	106	83
13C2-PFDoDA (surr.)	1	%	65	81	81	87
13C2-PFTeDA (surr.)	1	%	90	98	52	97
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	107	93	104	115
D3-N-MeFOSA (surr.)	1	%	100	85	130	87
D5-N-EtFOSA (surr.)	1	%	81	93	53	105
D7-N-MeFOSE (surr.)	1	%	47	69	77	83
D9-N-EtFOSE (surr.)	1	%	101	108	15	88
D5-N-EtFOSAA (surr.)	1	%	41	119	61	118
D3-N-MeFOSAA (surr.)	1	%	110	49	144	103
Perfluoroalkyl sulfonic acids (PFSA)						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	72	72	83	84
18O2-PFHxS (surr.)	1	%	63	118	86	97
13C8-PFOS (surr.)	1	%	79	80	102	118
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	67	77	74	80
13C2-6:2 FTSA (surr.)	1	%	88	91	93	97

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025026	M22- My0025027	M22- My0025028	M22- My0025029
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
13C2-8:2 FTSA (surr.)	1	%	91	100	106	141
13C2-10:2 FTSA (surr.)	1	%	90	101	86	91
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

Client Sample ID			SX_OB_20220 510_20_22_SS _Primary_EUF	SX_OB_20220 511_00_07_SS _Primary_EUF	SX_OB_20220 511_04_04_SS _Primary_EUF	SX_OB_20220 511_04_14_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025030	M22- My0025033	M22- My0025034	M22- My0025035
Date Sampled			May 10, 2022	May 11, 2022	May 11, 2022	May 11, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Volatile Organics						
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethane	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

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025030	M22- My0025033	M22- My0025034	M22- My0025035
Date Sampled			May 10, 2022	May 11, 2022	May 11, 2022	May 11, 2022
Test/Reference	LOR	Unit				
Volatile Organics						
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	59	84	68	146
Toluene-d8 (surr.)	1	%	60	70	55	142

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025030	M22- My0025033	M22- My0025034	M22- My0025035
Date Sampled			May 10, 2022	May 11, 2022	May 11, 2022	May 11, 2022
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	126	133	138	136
p-Terphenyl-d14 (surr.)	1	%	74	102	121	107
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_OB_20220 510_20_22_SS _Primary_EUF	SX_OB_20220 511_00_07_SS _Primary_EUF	SX_OB_20220 511_04_04_SS _Primary_EUF	SX_OB_20220 511_04_14_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025030	M22- My0025033	M22- My0025034	M22- My0025035
Date Sampled			May 10, 2022	May 11, 2022	May 11, 2022	May 11, 2022
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dibutylchlorendate (surr.)	1	%	144	113	131	144
Tetrachloro-m-xylene (surr.)	1	%	94	79	99	98
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	144	113	131	144
Tetrachloro-m-xylene (surr.)	1	%	94	79	99	98
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1	< 1
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	41	32	42	48
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Other Parameters						
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
Fluoride (Total)	100	mg/kg	890	300	< 100	220
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.0	7.6	8.2	7.6
% Moisture	1	%	31	34	32	31

Client Sample ID			SX_OB_20220 510_20_22_SS _Primary_EUF	SX_OB_20220 511_00_07_SS _Primary_EUF	SX_OB_20220 511_04_04_SS _Primary_EUF	SX_OB_20220 511_04_14_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025030	M22- My0025033	M22- My0025034	M22- My0025035
Date Sampled			May 10, 2022	May 11, 2022	May 11, 2022	May 11, 2022
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	38	44	54	55
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	160	170	170	150
Copper	5	mg/kg	82	82	100	110
Lead	5	mg/kg	< 5	5.1	5.1	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	240	210	350	300
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	170	150	250	280
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTeDA) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	96	97	97	98
13C5-PFPeA (surr.)	1	%	87	93	91	93
13C5-PFHxA (surr.)	1	%	92	92	89	90
13C4-PFHpA (surr.)	1	%	93	100	93	93
13C8-PFOA (surr.)	1	%	107	98	106	104
13C5-PFNA (surr.)	1	%	87	91	92	80
13C6-PFDA (surr.)	1	%	90	69	78	74
13C2-PFUnDA (surr.)	1	%	114	107	105	102
13C2-PFDoDA (surr.)	1	%	100	90	77	95
13C2-PFTeDA (surr.)	1	%	109	109	98	88
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	95	103	96	113
D3-N-MeFOSA (surr.)	1	%	89	85	81	93

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Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0025030	M22- My0025033	M22- My0025034	M22- My0025035
Date Sampled			May 10, 2022	May 11, 2022	May 11, 2022	May 11, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D5-N-EtFOSA (surr.)	1	%	92	88	94	94
D7-N-MeFOSE (surr.)	1	%	72	32	75	62
D9-N-EtFOSE (surr.)	1	%	102	103	98	101
D5-N-EtFOSAA (surr.)	1	%	122	136	118	24
D3-N-MeFOSAA (surr.)	1	%	87	185	98	171
Perfluoroalkyl sulfonic acids (PFASs)						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	76	73	78	75
18O2-PFHxS (surr.)	1	%	98	105	99	85
13C8-PFOS (surr.)	1	%	102	99	108	95
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	75	84	79	80
13C2-6:2 FTSA (surr.)	1	%	94	92	109	86
13C2-8:2 FTSA (surr.)	1	%	111	99	107	115
13C2-10:2 FTSA (surr.)	1	%	132	75	141	72
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
IWRG 621 WGTP Suite			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 11, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 11, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 11, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	May 11, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	May 11, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 11, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	May 11, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	May 11, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 11, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 11, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	May 11, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	May 12, 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	May 12, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	May 11, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	May 11, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	May 11, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 11, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 11, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 11, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 11, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 11, 2022	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 11, 2022 11:40 AM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	887299	Due:	May 18, 2022
Project Name:	20220511043744-Eurofin-52	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_OB_20220510_07_51_S_S_Triplicate_EUF	May 10, 2022	7:51AM	Soil	M22-My0025020		X	X	X
2	SX_OB_20220510_07_57_S_S_Primary_EUF	May 10, 2022	7:57AM	Soil	M22-My0025021		X	X	X
3	SX_OB_20220510_09_11_S_R_Rinsate_EUF	May 10, 2022	9:11AM	Water	M22-My0025022			X	

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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
4	SX_OB_20220510_09_12_S B_Blank_EUF	May 10, 2022	9:12AM	Water	M22-My0025023			X	
5	SX_IB_20220510_11_57_SS_Primary_EUF	May 10, 2022	11:57AM	Soil	M22-My0025024		X	X	X
6	SX_OB_20220510_12_11_S_S_Primary_EUF	May 10, 2022	12:11PM	Soil	M22-My0025025		X	X	X
7	SX_OB_20220510_15_45_S_S_Primary_EUF	May 10, 2022	3:45PM	Soil	M22-My0025026		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
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									
8	SX_OB_20220510_15_46_S_S_Duplicate_EUF	May 10, 2022	3:46PM	Soil	M22-My0025027		X	X	X
9	SX_OB_20220510_20_05_S_S_Primary_EUF	May 10, 2022	8:05PM	Soil	M22-My0025028		X	X	X
10	SX_OB_20220510_20_07_S_S_Duplicate_EUF	May 10, 2022	8:07PM	Soil	M22-My0025029		X	X	X
11	SX_OB_20220510_20_22_S	May 10, 2022	8:22PM	Soil	M22-My0025030		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
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									
	S_Primary_EU F								
12	SX_OB_20220 510_20_32_S R_Rinsate_EU F	May 10, 2022	8:32PM	Water	M22- My0025031			X	
13	SX_OB_20220 510_20_33_S B_Blank_EUF	May 10, 2022	8:33PM	Water	M22- My0025032			X	
14	SX_OB_20220 511_00_07_S S_Primary_EU F	May 11, 2022	12:07AM	Soil	M22- My0025033		X	X	X
15	SX_OB_20220	May 11, 2022	4:04AM	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
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									
15	SX_OB_20220511_04_04_S_S_Primary_EU_F	May 11, 2022	4:04AM	Soil	M22-My0025034				
16	SX_OB_20220511_04_14_S_S_Primary_EU_F	May 11, 2022	4:14AM	Soil	M22-My0025035		X	X	X
17	SX_OB_20220510_07_51_S_S_Triplicate_EUF	May 10, 2022	7:51AM	AUS Leachate - pH 5.0	M22-My0025036	X		X	
18	SX_OB_20220510_07_57_S	May 10, 2022	7:57AM	AUS Leachate - pH 5.0	M22-My0025037	X		X	

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

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (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									
	S_Primary_EU F								
19	SX_IB_20220510_11_57_SS_Primary_EUF	May 10, 2022	11:57AM	AUS Leachate - pH 5.0	M22-My0025038	X		X	
20	SX_OB_20220510_12_11_S_Primary_EUF	May 10, 2022	12:11PM	AUS Leachate - pH 5.0	M22-My0025039	X		X	
21	SX_OB_20220510_15_45_S_Primary_EUF	May 10, 2022	3:45PM	AUS Leachate - pH 5.0	M22-My0025040	X		X	
22	SX_OB_20220	May 10, 2022	3:46PM	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
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									
22	SX_OB_20220510_15_46_S_S_Duplicate_EUF	May 10, 2022	3:46PM	AUS Leachate - pH 5.0	M22-My0025041				
23	SX_OB_20220510_20_05_S_S_Primary_EUF	May 10, 2022	8:05PM	AUS Leachate - pH 5.0	M22-My0025042	X		X	
24	SX_OB_20220510_20_07_S_S_Duplicate_EUF	May 10, 2022	8:07PM	AUS Leachate - pH 5.0	M22-My0025043	X		X	
25	SX_OB_20220510_20_22_S	May 10, 2022	8:22PM	AUS Leachate - pH 5.0	M22-My0025044	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									
	S_Primary_EU F								
26	SX_OB_20220 511_00_07_S S_Primary_EU F	May 11, 2022	12:07AM	AUS Leachate - pH 5.0	M22- My0025045	X		X	
27	SX_OB_20220 511_04_04_S S_Primary_EU F	May 11, 2022	4:04AM	AUS Leachate - pH 5.0	M22- My0025046	X		X	
28	SX_OB_20220 511_04_14_S S_Primary_EU F	May 11, 2022	4:14AM	AUS Leachate - pH 5.0	M22- My0025047	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									
29	SX_OB_20220510_07_51_S_S_Triplicate_EUF	May 10, 2022	7:51AM	AUS Leachate - Reagent Water	M22-My0025048	X		X	
30	SX_OB_20220510_07_57_S_S_Primary_EUF	May 10, 2022	7:57AM	AUS Leachate - Reagent Water	M22-My0025049	X		X	
31	SX_IB_20220510_11_57_SS_Primary_EUF	May 10, 2022	11:57AM	AUS Leachate - Reagent Water	M22-My0025050	X		X	
32	SX_OB_20220510_12_11_S_S_Primary_EUF	May 10, 2022	12:11PM	AUS Leachate - Reagent Water	M22-My0025051	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								
33	SX_OB_20220 510_15_45_S S_Primary_EU F	May 10, 2022	3:45PM	AUS Leachate - Reagent Water	M22- My0025052	X		X	
34	SX_OB_20220 510_15_46_S S_Duplicate_E UF	May 10, 2022	3:46PM	AUS Leachate - Reagent Water	M22- My0025053	X		X	
35	SX_OB_20220 510_20_05_S S_Primary_EU F	May 10, 2022	8:05PM	AUS Leachate - Reagent Water	M22- My0025054	X		X	
36	SX_OB_20220	May 10, 2022	8:07PM	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
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									
36	SX_OB_20220510_20_07_S_S_Duplicate_EUF	May 10, 2022	8:07PM	AUS Leachate - Reagent Water	M22-My0025055				
37	SX_OB_20220510_20_22_S_S_Primary_EUF	May 10, 2022	8:22PM	AUS Leachate - Reagent Water	M22-My0025056	X		X	
38	SX_OB_20220511_00_07_S_S_Primary_EUF	May 11, 2022	12:07AM	AUS Leachate - Reagent Water	M22-My0025057	X		X	
39	SX_OB_20220511_04_04_S	May 11, 2022	4:04AM	AUS Leachate - Reagent	M22-My0025058	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									
	S_Primary_EU F			Water					
40	SX_OB_20220 511_04_14_S S_Primary_EU F	May 11, 2022	4:14AM	AUS Leachate - Reagent Water	M22- My0025059	X		X	
Test Counts						24	12	40	12

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

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

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

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

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/kg	< 5			5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5			5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5			5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5			5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5			5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5			5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5			5	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 5			5	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5			5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5			5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5			5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/kg	< 5			5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/kg	< 5			5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10			10	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 10			10	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5			5	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 5			5	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 5			5	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 5			5	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 5			5	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/kg	< 10			10	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	81			70-130	Pass	
TRH C10-C14	%	117			70-130	Pass	
Naphthalene	%	76			70-130	Pass	
TRH C6-C10	%	77			70-130	Pass	
TRH >C10-C16	%	120			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	78			70-130	Pass	
1.1.1-Trichloroethane	%	94			70-130	Pass	
1.2-Dichlorobenzene	%	79			70-130	Pass	
1.2-Dichloroethane	%	88			70-130	Pass	
Benzene	%	89			70-130	Pass	
Ethylbenzene	%	93			70-130	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	84		70-130	Pass	
Toluene	%	96		70-130	Pass	
Trichloroethene	%	96		70-130	Pass	
Xylenes - Total*	%	88		70-130	Pass	
LCS - % Recovery						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	%	95		70-130	Pass	
Acenaphthylene	%	102		70-130	Pass	
Anthracene	%	92		70-130	Pass	
Benz(a)anthracene	%	101		70-130	Pass	
Benzo(a)pyrene	%	85		70-130	Pass	
Benzo(b&i)fluoranthene	%	88		70-130	Pass	
Benzo(g,h,i)perylene	%	97		70-130	Pass	
Benzo(k)fluoranthene	%	80		70-130	Pass	
Chrysene	%	107		70-130	Pass	
Dibenz(a,h)anthracene	%	77		70-130	Pass	
Fluoranthene	%	112		70-130	Pass	
Fluorene	%	117		70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	74		70-130	Pass	
Naphthalene	%	116		70-130	Pass	
Phenanthrene	%	99		70-130	Pass	
Pyrene	%	113		70-130	Pass	
LCS - % Recovery						
Organochlorine Pesticides						
Chlordanes - Total	%	88		70-130	Pass	
4,4'-DDD	%	92		70-130	Pass	
4,4'-DDE	%	124		70-130	Pass	
4,4'-DDT	%	93		70-130	Pass	
a-HCH	%	89		70-130	Pass	
Aldrin	%	87		70-130	Pass	
b-HCH	%	105		70-130	Pass	
d-HCH	%	107		70-130	Pass	
Dieldrin	%	84		70-130	Pass	
Endosulfan I	%	93		70-130	Pass	
Endosulfan II	%	100		70-130	Pass	
Endosulfan sulphate	%	80		70-130	Pass	
Endrin	%	83		70-130	Pass	
Endrin aldehyde	%	123		70-130	Pass	
Endrin ketone	%	93		70-130	Pass	
g-HCH (Lindane)	%	81		70-130	Pass	
Heptachlor	%	81		70-130	Pass	
Heptachlor epoxide	%	89		70-130	Pass	
Hexachlorobenzene	%	96		70-130	Pass	
Methoxychlor	%	105		70-130	Pass	
LCS - % Recovery						
Polychlorinated Biphenyls						
Aroclor-1260	%	120		70-130	Pass	
LCS - % Recovery						
Phenols (Halogenated)						
2-Chlorophenol	%	77		25-140	Pass	
2,4-Dichlorophenol	%	74		25-140	Pass	
2,4,5-Trichlorophenol	%	72		25-140	Pass	
2,4,6-Trichlorophenol	%	75		25-140	Pass	
2,6-Dichlorophenol	%	73		25-140	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
4-Chloro-3-methylphenol	%	89		25-140	Pass	
Pentachlorophenol	%	113		25-140	Pass	
Tetrachlorophenols - Total	%	100		25-140	Pass	
LCS - % Recovery						
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	%	42		25-140	Pass	
2-Methyl-4,6-dinitrophenol	%	73		25-140	Pass	
2-Nitrophenol	%	93		25-140	Pass	
2,4-Dimethylphenol	%	93		25-140	Pass	
2,4-Dinitrophenol	%	53		25-140	Pass	
2-Methylphenol (o-Cresol)	%	75		25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	95		25-140	Pass	
4-Nitrophenol	%	73		25-140	Pass	
Dinoseb	%	98		25-140	Pass	
Phenol	%	91		25-140	Pass	
LCS - % Recovery						
Chromium (hexavalent)	%	97		70-130	Pass	
Cyanide (total)	%	117		70-130	Pass	
Fluoride (Total)	%	123		70-130	Pass	
LCS - % Recovery						
Heavy Metals						
Arsenic	%	110		80-120	Pass	
Cadmium	%	114		80-120	Pass	
Chromium	%	112		80-120	Pass	
Copper	%	110		80-120	Pass	
Lead	%	116		80-120	Pass	
Mercury	%	109		80-120	Pass	
Molybdenum	%	109		80-120	Pass	
Nickel	%	106		80-120	Pass	
Selenium	%	110		80-120	Pass	
Silver	%	115		80-120	Pass	
Tin	%	108		80-120	Pass	
Zinc	%	108		80-120	Pass	
LCS - % Recovery						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	%	106		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	103		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	111		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	105		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	123		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	121		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	139		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	109		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	113		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	119		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	119		50-150	Pass	
LCS - % Recovery						
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)	%	100		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	117		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	123		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	93		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	99		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	92		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	123			50-150	Pass		
LCS - % Recovery								
Perfluoroalkyl sulfonic acids (PFASs)								
Perfluorobutanesulfonic acid (PFBS)	%	99			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	97			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	123			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	117			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	111			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	68			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	91			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	102			50-150	Pass		
LCS - % Recovery								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	116			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	100			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	124			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	130			50-150	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
Total Recoverable Hydrocarbons				Result 1				
TRH C10-C14	M22-My0025170	NCP	%	115		70-130	Pass	
TRH >C10-C16	M22-My0025170	NCP	%	117		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	M22-My0016739	NCP	%	78		70-130	Pass	
Acenaphthylene	M22-My0016739	NCP	%	89		70-130	Pass	
Anthracene	M22-My0016739	NCP	%	94		70-130	Pass	
Benz(a)anthracene	M22-My0016739	NCP	%	90		70-130	Pass	
Benzo(a)pyrene	M22-My0016739	NCP	%	81		70-130	Pass	
Benzo(b&j)fluoranthene	M22-My0016739	NCP	%	80		70-130	Pass	
Benzo(g,h,i)perylene	M22-My0016739	NCP	%	76		70-130	Pass	
Benzo(k)fluoranthene	M22-My0016739	NCP	%	73		70-130	Pass	
Chrysene	M22-My0016739	NCP	%	90		70-130	Pass	
Dibenz(a,h)anthracene	M22-My0016739	NCP	%	89		70-130	Pass	
Fluoranthene	M22-My0016739	NCP	%	98		70-130	Pass	
Fluorene	M22-My0016739	NCP	%	108		70-130	Pass	
Indeno(1,2,3-cd)pyrene	M22-My0016739	NCP	%	93		70-130	Pass	
Naphthalene	M22-My0016739	NCP	%	90		70-130	Pass	
Phenanthrene	M22-My0016739	NCP	%	97		70-130	Pass	
Pyrene	M22-My0016739	NCP	%	99		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	M22-My0017260	NCP	%	106		70-130	Pass	
4,4'-DDD	M22-My0017260	NCP	%	90		70-130	Pass	
4,4'-DDE	M22-My0017260	NCP	%	117		70-130	Pass	
4,4'-DDT	M22-My0017260	NCP	%	85		70-130	Pass	
a-HCH	M22-My0017260	NCP	%	107		70-130	Pass	
Aldrin	M22-My0017260	NCP	%	108		70-130	Pass	
b-HCH	M22-My0017260	NCP	%	102		70-130	Pass	
d-HCH	M22-My0017260	NCP	%	108		70-130	Pass	
Dieldrin	M22-My0017260	NCP	%	107		70-130	Pass	
Endosulfan I	M22-My0017260	NCP	%	111		70-130	Pass	
Endosulfan II	M22-My0017260	NCP	%	112		70-130	Pass	
Endosulfan sulphate	M22-My0017260	NCP	%	88		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Endrin	M22-My0017260	NCP	%	99		70-130	Pass	
Endrin aldehyde	M22-My0017260	NCP	%	115		70-130	Pass	
Endrin ketone	M22-My0017260	NCP	%	111		70-130	Pass	
g-HCH (Lindane)	M22-My0017260	NCP	%	107		70-130	Pass	
Heptachlor	M22-My0017260	NCP	%	87		70-130	Pass	
Heptachlor epoxide	M22-My0017260	NCP	%	104		70-130	Pass	
Hexachlorobenzene	M22-My0017260	NCP	%	118		70-130	Pass	
Methoxychlor	M22-My0017260	NCP	%	83		70-130	Pass	
Spike - % Recovery								
Polychlorinated Biphenyls				Result 1				
Aroclor-1016	M22-My0025020	CP	%	102		70-130	Pass	
Aroclor-1260	M22-My0025020	CP	%	112		70-130	Pass	
Spike - % Recovery								
Phenols (Halogenated)				Result 1				
2-Chlorophenol	M22-My0016739	NCP	%	75		30-130	Pass	
2,4-Dichlorophenol	M22-My0016739	NCP	%	93		30-130	Pass	
2,4,5-Trichlorophenol	M22-My0016739	NCP	%	82		30-130	Pass	
2,4,6-Trichlorophenol	M22-My0016739	NCP	%	74		30-130	Pass	
2,6-Dichlorophenol	M22-My0016739	NCP	%	92		30-130	Pass	
4-Chloro-3-methylphenol	M22-My0016739	NCP	%	62		30-130	Pass	
Pentachlorophenol	M22-My0016739	NCP	%	72		30-130	Pass	
Tetrachlorophenols - Total	M22-My0016739	NCP	%	117		30-130	Pass	
Spike - % Recovery								
Phenols (non-Halogenated)				Result 1				
2-Cyclohexyl-4,6-dinitrophenol	M22-My0013603	NCP	%	78		30-130	Pass	
2-Methyl-4,6-dinitrophenol	M22-My0016739	NCP	%	40		30-130	Pass	
2-Nitrophenol	M22-My0016739	NCP	%	74		30-130	Pass	
2,4-Dimethylphenol	M22-My0016739	NCP	%	77		30-130	Pass	
2-Methylphenol (o-Cresol)	M22-My0016739	NCP	%	58		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-My0016739	NCP	%	69		30-130	Pass	
4-Nitrophenol	M22-My0016739	NCP	%	61		30-130	Pass	
Dinoseb	M22-My0016739	NCP	%	53		30-130	Pass	
Phenol	M22-My0016739	NCP	%	61		30-130	Pass	
Spike - % Recovery								
				Result 1				
Cyanide (total)	M22-My0017020	NCP	%	71		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	M22-My0016912	NCP	%	107		75-125	Pass	
Cadmium	M22-My0016912	NCP	%	93		75-125	Pass	
Chromium	M22-My0016912	NCP	%	112		75-125	Pass	
Copper	M22-My0016912	NCP	%	108		75-125	Pass	
Lead	M22-My0016912	NCP	%	117		75-125	Pass	
Mercury	M22-My0016912	NCP	%	111		75-125	Pass	
Molybdenum	M22-My0016912	NCP	%	113		75-125	Pass	
Nickel	M22-My0016912	NCP	%	107		75-125	Pass	
Selenium	M22-My0016912	NCP	%	101		75-125	Pass	
Silver	M22-My0016912	NCP	%	94		75-125	Pass	
Tin	M22-My0016912	NCP	%	114		75-125	Pass	
Zinc	M22-My0016912	NCP	%	113		75-125	Pass	
Spike - % Recovery								
Perfluoroalkyl carboxylic acids (PFCA)				Result 1				
Perfluorobutanoic acid (PFBA)	M22-My0013601	NCP	%	110		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-My0013601	NCP	%	104		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Perfluorohexanoic acid (PFHxA)	M22-My0013601	NCP	%	108		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-My0013601	NCP	%	112		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-My0013601	NCP	%	113		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-My0013601	NCP	%	118		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-My0013601	NCP	%	122		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-My0013601	NCP	%	99		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-My0013601	NCP	%	122		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-My0013601	NCP	%	121		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-My0013601	NCP	%	115		50-150	Pass	
Spike - % Recovery								
Perfluoroalkyl sulfonamido substances				Result 1				
Perfluorooctane sulfonamide (FOSA)	M22-My0013601	NCP	%	100		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0013601	NCP	%	122		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0013601	NCP	%	97		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0013601	NCP	%	84		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0013601	NCP	%	114		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-My0013601	NCP	%	136		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0013601	NCP	%	85		50-150	Pass	
Spike - % Recovery								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1				
Perfluorobutanesulfonic acid (PFBS)	M22-My0013601	NCP	%	104		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-My0013601	NCP	%	123		50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-My0013601	NCP	%	130		50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-My0013601	NCP	%	110		50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-My0013601	NCP	%	122		50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0013601	NCP	%	75		50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-My0013601	NCP	%	101		50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-My0013601	NCP	%	122		50-150	Pass	
Spike - % Recovery								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-My0013601	NCP	%	113		50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0013601	NCP	%	122		50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0013601	NCP	%	134		50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0013601	NCP	%	146		50-150	Pass	
Spike - % Recovery				Result 1				

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Fluoride (Total)	M22-My0025021	CP	%	107			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M22-My0025024	CP	%	93			70-130	Pass	
Naphthalene	M22-My0025024	CP	%	78			70-130	Pass	
TRH C6-C10	M22-My0025024	CP	%	92			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	M22-My0025024	CP	%	85			70-130	Pass	
1.1.1-Trichloroethane	M22-My0025024	CP	%	96			70-130	Pass	
1.2-Dichlorobenzene	M22-My0025024	CP	%	79			70-130	Pass	
1.2-Dichloroethane	M22-My0025024	CP	%	103			70-130	Pass	
Benzene	M22-My0025024	CP	%	91			70-130	Pass	
Ethylbenzene	M22-My0025024	CP	%	77			70-130	Pass	
m&p-Xylenes	M22-My0025024	CP	%	81			70-130	Pass	
o-Xylene	M22-My0025024	CP	%	85			70-130	Pass	
Toluene	M22-My0025024	CP	%	92			70-130	Pass	
Trichloroethene	M22-My0025024	CP	%	74			70-130	Pass	
Xylenes - Total*	M22-My0025024	CP	%	82			70-130	Pass	
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	M22-My0025028	CP	%	100			70-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2.4-Dinitrophenol	M22-My0009878	NCP	%	51			30-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	M22-My0013605	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M22-My0013605	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M22-My0013605	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C10-C16	M22-My0013605	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M22-My0013605	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M22-My0013605	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&i)fluoranthene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M22-My0016734	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4.4'-DDD	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4.4'-DDE	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4.4'-DDT	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M22-My0022691	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-My0016734	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M22-My0016734	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-My0016734	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-My0016734	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-My0016734	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-My0016734	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-My0016734	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-My0016734	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-My0016734	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4-Dichlorophenol	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4.5-Trichlorophenol	M22-My0016734	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2.4.6-Trichlorophenol	M22-My0016734	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2.6-Dichlorophenol	M22-My0022691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-My0016734	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-My0016734	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-My0016734	NCP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4.6-dinitrophenol	M22-My0016734	NCP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4.6-dinitrophenol	M22-My0016734	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-My0016734	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2.4-Dimethylphenol	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4-Dinitrophenol	M22-My0016734	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-My0016734	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-My0016734	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M22-My0016734	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-My0016734	NCP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-My0016734	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate				Result 1	Result 2	RPD		
Cyanide (total)	M22-My0012886	NCP	mg/kg	< 5	< 5	<1	30%	Pass
pH (1:5 Aqueous extract at 25°C as rec.)	M22-My0015273	NCP	pH Units	8.8	8.8	pass	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-My0013610	NCP	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-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-My0013610	NCP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0013610	NCP	ug/kg	< 10	< 10	<1	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass

Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0013610	NCP	ug/kg	< 10	< 10	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0013610	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C6-C9	M22-My0025021	CP	mg/kg	< 20	< 20	<1	30%	Pass
Naphthalene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	M22-My0025021	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Hexachlorobutadiene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.1-Dichloroethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trichlorobenzene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1-Dichloroethene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1-Trichloroethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1.2-Tetrachloroethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2-Trichloroethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2.2-Tetrachloroethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dibromoethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichlorobenzene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloroethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloropropane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.3-Trichloropropane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trimethylbenzene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichlorobenzene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichloropropane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3.5-Trimethylbenzene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.4-Dichlorobenzene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzene	M22-My0025021	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Bromobenzene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
cis-1,3-Dichloropropene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	M22-My0025021	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Iodomethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	M22-My0025021	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methylene Chloride	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
o-Xylene	M22-My0025021	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Styrene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	M22-My0025021	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1,2-Dichloroethene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1,3-Dichloropropene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	M22-My0025021	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes - Total*	M22-My0025021	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Fluoride (Total)	M22-My0025025	CP	mg/kg	250	240	6.0	30%	Pass	
% Moisture	M22-My0025025	CP	%	28	28	1.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Fluoride (Total)	M22-My0025027	CP	mg/kg	110	160	33	30%	Fail	Q15
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M22-My0025028	CP	mg/kg	36	45	22	30%	Pass	
Cadmium	M22-My0025028	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M22-My0025028	CP	mg/kg	150	190	25	30%	Pass	
Copper	M22-My0025028	CP	mg/kg	81	110	29	30%	Pass	
Lead	M22-My0025028	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Mercury	M22-My0025028	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M22-My0025028	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M22-My0025028	CP	mg/kg	270	310	13	30%	Pass	
Selenium	M22-My0025028	CP	mg/kg	< 2	2.7	41	30%	Fail	Q15
Silver	M22-My0025028	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Tin	M22-My0025028	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M22-My0025028	CP	mg/kg	220	240	6.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	M22-My0025029	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Fluoride (Total)	M22-My0025030	CP	mg/kg	890	530	50	30%	Fail	Q15
Duplicate									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	M22-My0025033	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	M22-My0025035	CP	mg/kg	< 1	< 1	<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:

Michael Cassidy	Analytical Services Manager
Caitlin Breeze	Senior Analyst-Inorganic
Edward Lee	Senior Analyst-Organic
Harry Bacalis	Senior Analyst-Volatile
Joseph Edouard	Senior Analyst-Organic
Joseph Edouard	Senior Analyst-PFAS
Joseph Edouard	Senior Analyst-Volatile
Mary Makarios	Senior Analyst-Sample Properties
Scott Beddoes	Senior Analyst-Inorganic
Scott Beddoes	Senior Analyst-Metal



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
SA 5063



NATA Accredited
Accreditation Number 1261
Site Number 1254

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

Attention: **David Lawson**

Report **887299-W**
Project name **20220511043744-Eurofin-52**
Project ID **JC0927**
Received Date **May 11, 2022**

Client Sample ID			SX_OB_20220 510_09_11_SR _Rinsate_EUF	SX_OB_20220 510_09_12_SB _Blank_EUF	SX_OB_20220 510_20_32_SR _Rinsate_EUF	SX_OB_20220 510_20_33_SB _Blank_EUF
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M22-My0025022	M22-My0025023	M22-My0025031	M22-My0025032
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	106	78	99	100
13C5-PFPeA (surr.)	1	%	108	82	104	114
13C5-PFHxA (surr.)	1	%	94	68	85	88
13C4-PFHpA (surr.)	1	%	78	60	75	78
13C8-PFOA (surr.)	1	%	78	57	64	75
13C5-PFNA (surr.)	1	%	86	63	72	83
13C6-PFDA (surr.)	1	%	97	60	60	64
13C2-PFUnDA (surr.)	1	%	97	59	85	99
13C2-PFDoDA (surr.)	1	%	101	69	65	93
13C2-PFTeDA (surr.)	1	%	79	100	56	70
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	112	83	103	108

Client Sample ID			SX_OB_20220 510_09_11_SR _Rinsate_EUF	SX_OB_20220 510_09_12_SB _Blank_EUF	SX_OB_20220 510_20_32_SR _Rinsate_EUF	SX_OB_20220 510_20_33_SB _Blank_EUF
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M22- My0025022	M22- My0025023	M22- My0025031	M22- My0025032
Date Sampled			May 10, 2022	May 10, 2022	May 10, 2022	May 10, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D3-N-MeFOSA (surr.)	1	%	25	72	64	31
D5-N-EtFOSA (surr.)	1	%	35	88	77	41
D7-N-MeFOSE (surr.)	1	%	115	81	115	83
D9-N-EtFOSE (surr.)	1	%	91	80	103	84
D5-N-EtFOSAA (surr.)	1	%	76	54	75	56
D3-N-MeFOSAA (surr.)	1	%	94	59	32	48
Perfluoroalkyl sulfonic acids (PFASs)						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	106	79	97	101
18O2-PFHxS (surr.)	1	%	96	70	69	89
13C8-PFOS (surr.)	1	%	81	55	60	73
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	99	76	94	97
13C2-6:2 FTSA (surr.)	1	%	98	66	72	75
13C2-8:2 FTSA (surr.)	1	%	109	70	77	89
13C2-10:2 FTSA (surr.)	1	%	109	69	52	80
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Melbourne	May 11, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	May 11, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	May 11, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	May 11, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	May 11, 2022	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 11, 2022 11:40 AM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	887299	Due:	May 18, 2022
Project Name:	20220511043744-Eurofin-52	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_OB_20220510_07_51_S_S_Triplicate_EUF	May 10, 2022	7:51AM	Soil	M22-My0025020		X	X	X
2	SX_OB_20220510_07_57_S_S_Primary_EUF	May 10, 2022	7:57AM	Soil	M22-My0025021		X	X	X
3	SX_OB_20220510_09_11_S_R_Rinsate_EUF	May 10, 2022	9:11AM	Water	M22-My0025022			X	

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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
4	SX_OB_20220510_09_12_S B_Blank_EUF	May 10, 2022	9:12AM	Water	M22-My0025023			X	
5	SX_IB_20220510_11_57_SS_Primary_EUF	May 10, 2022	11:57AM	Soil	M22-My0025024		X	X	X
6	SX_OB_20220510_12_11_S_S_Primary_EUF	May 10, 2022	12:11PM	Soil	M22-My0025025		X	X	X
7	SX_OB_20220510_15_45_S_S_Primary_EUF	May 10, 2022	3:45PM	Soil	M22-My0025026		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
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									
8	SX_OB_20220510_15_46_S_S_Duplicate_EUF	May 10, 2022	3:46PM	Soil	M22-My0025027		X	X	X
9	SX_OB_20220510_20_05_S_S_Primary_EUF	May 10, 2022	8:05PM	Soil	M22-My0025028		X	X	X
10	SX_OB_20220510_20_07_S_S_Duplicate_EUF	May 10, 2022	8:07PM	Soil	M22-My0025029		X	X	X
11	SX_OB_20220510_20_22_S	May 10, 2022	8:22PM	Soil	M22-My0025030		X	X	X

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	S_Primary_EU F								
12	SX_OB_20220 510_20_32_S R_Rinsate_EU F	May 10, 2022	8:32PM	Water	M22- My0025031			X	
13	SX_OB_20220 510_20_33_S B_Blank_EUF	May 10, 2022	8:33PM	Water	M22- My0025032			X	
14	SX_OB_20220 511_00_07_S S_Primary_EU F	May 11, 2022	12:07AM	Soil	M22- My0025033		X	X	X
15	SX_OB_20220	May 11, 2022	4:04AM	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
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									
15	SX_OB_20220511_04_04_S_S_Primary_EU_F	May 11, 2022	4:04AM	Soil	M22-My0025034				
16	SX_OB_20220511_04_14_S_S_Primary_EU_F	May 11, 2022	4:14AM	Soil	M22-My0025035		X	X	X
17	SX_OB_20220510_07_51_S_S_Triplicate_EUF	May 10, 2022	7:51AM	AUS Leachate - pH 5.0	M22-My0025036	X		X	
18	SX_OB_20220510_07_57_S	May 10, 2022	7:57AM	AUS Leachate - pH 5.0	M22-My0025037	X		X	

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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	S_Primary_EU F								
19	SX_IB_202205 10_11_57_SS _Primary_EUF	May 10, 2022	11:57AM	AUS Leachate - pH 5.0	M22- My0025038	X		X	
20	SX_OB_20220 510_12_11_S S_Primary_EU F	May 10, 2022	12:11PM	AUS Leachate - pH 5.0	M22- My0025039	X		X	
21	SX_OB_20220 510_15_45_S S_Primary_EU F	May 10, 2022	3:45PM	AUS Leachate - pH 5.0	M22- My0025040	X		X	
22	SX_OB_20220	May 10, 2022	3:46PM	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
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									
22	SX_OB_20220510_15_46_S_S_Duplicate_EUF	May 10, 2022	3:46PM	AUS Leachate - pH 5.0	M22-My0025041				
23	SX_OB_20220510_20_05_S_S_Primary_EUF	May 10, 2022	8:05PM	AUS Leachate - pH 5.0	M22-My0025042	X		X	
24	SX_OB_20220510_20_07_S_S_Duplicate_EUF	May 10, 2022	8:07PM	AUS Leachate - pH 5.0	M22-My0025043	X		X	
25	SX_OB_20220510_20_22_S	May 10, 2022	8:22PM	AUS Leachate - pH 5.0	M22-My0025044	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									
	S_Primary_EU F								
26	SX_OB_20220 511_00_07_S S_Primary_EU F	May 11, 2022	12:07AM	AUS Leachate - pH 5.0	M22- My0025045	X		X	
27	SX_OB_20220 511_04_04_S S_Primary_EU F	May 11, 2022	4:04AM	AUS Leachate - pH 5.0	M22- My0025046	X		X	
28	SX_OB_20220 511_04_14_S S_Primary_EU F	May 11, 2022	4:14AM	AUS Leachate - pH 5.0	M22- My0025047	X		X	

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

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (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									
29	SX_OB_20220510_07_51_S_S_Triplicate_EUF	May 10, 2022	7:51AM	AUS Leachate - Reagent Water	M22-My0025048	X		X	
30	SX_OB_20220510_07_57_S_S_Primary_EUF	May 10, 2022	7:57AM	AUS Leachate - Reagent Water	M22-My0025049	X		X	
31	SX_IB_20220510_11_57_SS_Primary_EUF	May 10, 2022	11:57AM	AUS Leachate - Reagent Water	M22-My0025050	X		X	
32	SX_OB_20220510_12_11_S_S_Primary_EUF	May 10, 2022	12:11PM	AUS Leachate - Reagent Water	M22-My0025051	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								
33	SX_OB_20220510_15_45_S_S_Primary_EU_F	May 10, 2022	3:45PM	AUS Leachate - Reagent Water	M22-My0025052	X		X	
34	SX_OB_20220510_15_46_S_S_Duplicate_EU_F	May 10, 2022	3:46PM	AUS Leachate - Reagent Water	M22-My0025053	X		X	
35	SX_OB_20220510_20_05_S_S_Primary_EU_F	May 10, 2022	8:05PM	AUS Leachate - Reagent Water	M22-My0025054	X		X	
36	SX_OB_20220510_20_05_S_S_Primary_EU_F	May 10, 2022	8:07PM	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
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									
36	SX_OB_20220510_20_07_S_S_Duplicate_EUF	May 10, 2022	8:07PM	AUS Leachate - Reagent Water	M22-My0025055				
37	SX_OB_20220510_20_22_S_S_Primary_EUF	May 10, 2022	8:22PM	AUS Leachate - Reagent Water	M22-My0025056	X		X	
38	SX_OB_20220511_00_07_S_S_Primary_EUF	May 11, 2022	12:07AM	AUS Leachate - Reagent Water	M22-My0025057	X		X	
39	SX_OB_20220511_04_04_S	May 11, 2022	4:04AM	AUS Leachate - Reagent	M22-My0025058	X		X	

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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	S_Primary_EU F			Water					
40	SX_OB_20220 511_04_14_S S_Primary_EU F	May 11, 2022	4:14AM	AUS Leachate - Reagent Water	M22- My0025059	X		X	
Test Counts						24	12	40	12

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05		0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01		0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01		0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01		0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01		0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01		0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01		0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01		0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01		0.01	Pass	
Perfluorotridecanoic acid (PFTTrDA)	ug/L	< 0.01		0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01		0.01	Pass	
Method Blank						
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05		0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05		0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05		0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	< 0.05		0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05		0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05		0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05		0.05	Pass	
Method Blank						
Perfluoroalkyl sulfonic acids (PFASs)						
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01		0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01		0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01		0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01		0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01		0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01		0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01		0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01		0.01	Pass	
Method Blank						
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01		0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05		0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01		0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01		0.01	Pass	
LCS - % Recovery						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	%	96		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	83		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	104		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	99		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	105		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	123		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	93		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	129		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	101		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	102		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	108		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
LCS - % Recovery								
Perfluoroalkyl sulfonamido substances								
Perfluorooctane sulfonamide (FOSA)	%	76			50-150	Pass		
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	110			50-150	Pass		
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	86			50-150	Pass		
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	58			50-150	Pass		
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	107			50-150	Pass		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	81			50-150	Pass		
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	82			50-150	Pass		
LCS - % Recovery								
Perfluoroalkyl sulfonic acids (PFSA's)								
Perfluorobutanesulfonic acid (PFBS)	%	87			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	89			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	113			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	121			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	113			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	98			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	111			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	70			50-150	Pass		
LCS - % Recovery								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	128			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	136			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	122			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
Spike - % Recovery								
Perfluoroalkyl carboxylic acids (PFCAs)								
Perfluorobutanoic acid (PFBA)	M22-My0024318	NCP	%	125		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-My0024318	NCP	%	80		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-My0024318	NCP	%	114		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-My0024318	NCP	%	118		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-My0024318	NCP	%	126		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-My0024318	NCP	%	115		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-My0024318	NCP	%	110		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-My0024318	NCP	%	131		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-My0024318	NCP	%	116		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-My0024318	NCP	%	109		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-My0024318	NCP	%	121		50-150	Pass	
Spike - % Recovery								
Perfluoroalkyl sulfonamido substances								
Perfluorooctane sulfonamide (FOSA)	M22-My0024318	NCP	%	94		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0024318	NCP	%	136		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0024318	NCP	%	112		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0024318	NCP	%	61		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0024318	NCP	%	126		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-My0024318	NCP	%	90			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSA)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M22-My0024318	NCP	%	92			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-My0024318	NCP	%	94			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-My0024318	NCP	%	120			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-My0024318	NCP	%	112			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-My0024318	NCP	%	119			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0024318	NCP	%	117			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-My0024318	NCP	%	92			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-My0024318	NCP	%	99			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-My0024318	NCP	%	146			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0024318	NCP	%	121			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0024318	NCP	%	130			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0024318	NCP	%	106			50-150	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Perfluoroalkyl carboxylic acids (PFCA)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M22-My0023194	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-My0023194	NCP	ug/L	0.01	0.02	14	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-My0023194	NCP	ug/L	0.03	0.03	2.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-My0023194	NCP	ug/L	0.18	0.17	5.0	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-My0023194	NCP	ug/L	1.5	1.3	8.0	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-My0023194	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0023194	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0023194	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0023194	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0023194	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-My0023194	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0023194	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0023194	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0023194	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass

Comments
Sample Integrity

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

Qualifier Codes/Comments

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

Authorised by:

Michael Cassidy	Analytical Services Manager
Joseph Edouard	Senior Analyst-PFAS



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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

CHAIN OF CUSTODY DOCUMENTATION



CLIENT: Agon Environmental
 ADDRESS / OFFICE: Melbourne
 PROJECT MANAGER (PM): Craig Trimbur
 PROJECT ID: JC9827
 P.O. NO.:
 QUOTE NO.: ME-150-19 WGTP
 RESULTS REQUIRED: (Date), 5 days

HK - EP Risk
 Martha - Agon
 MOBILE 1: +61 400 826 907 (Craig Trimbur)
 MOBILE 2: +61 490 411 004 (David Lawson)
 EMAIL REPORT TO:
 Labreports.TSI@agonenviro.com.au, agonenviro@esdlat.com.au, motherhublabresults1@wglp.com.au
 Labreports.TSI@agonenviro.com.au, agonenviro@esdlat.com.au

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

ALS ID	SAMPLE INFORMATION (Date, S = Split, W=Water)		DATE	TIME	CONTAINER INFORMATION		P16 plus Cr	PFA5 28 Extended suite	AQLP PFA5 - Extended Suite (Lab to determine pH)	DL Leachate PFA5 - Extended Suite	Notes:
	SAMPLE ID	MATRIX			Type / Code	Total bottles					
1, 15	SX_OB_20220510_07_49_SS_Primary_ALS	S	10.05.2022	7:49	Bucket	1	X	X	X	X	
2, 16	SX_OB_20220510_07_50_SS_Duplicate_ALS	S	10.05.2022	7:50	Bucket	1	X	X	X	X	
3, 17	SX_IB_20220510_08_00_SS_Primary_ALS	S	10.05.2022	8:00	Bucket	1	X	X	X	X	
4	SX_OB_20220510_08_04_SR_Rinsate_ALS	W	10.05.2022	8:04	Bottle	1	X				
5	SX_OB_20220510_09_10_SS_Blank_ALS	W	10.05.2022	9:10	Bottle	1	X				
6, 18	SX_OB_20220510_11_54_SS_Primary_ALS	S	10.05.2022	11:54	Bucket	1	X	X	X	X	
7, 19	SX_OB_20220510_15_47_SS_Triplicate_ALS	S	10.05.2022	15:47	Bucket	1	X	X	X	X	
8, 20	SX_IB_20220510_15_51_SS_Primary_ALS	S	10.05.2022	15:51	Bucket	1	X	X	X	X	
9, 21	SX_OB_20220510_15_55_SS_Primary_ALS	S	10.05.2022	15:55	Bucket	1	X	X	X	X	
10, 22	SX_OB_20220510_20_06_SS_Triplicate_ALS	S	10.05.2022	20:08	Bucket	1	X	X	X	X	
11, 23	SX_OB_20220510_20_10_SS_Primary_ALS	S	10.05.2022	20:10	Bucket	1	X	X	X	X	
12, 24	SX_OB_20220511_00_02_SS_Primary_ALS	S	11.05.2022	00:02	Bucket	1	X	X	X	X	
13, 25	SX_OB_20220511_00_09_SS_Primary_ALS	S	11.05.2022	00:09	Bucket	1	X	X	X	X	
14, 26	SX_OB_20220511_04_09_SS_Primary_ALS	S	11.05.2022	04:09	Bucket	1	X	X	X	X	

Environmental Division
 Melbourne
 Work Order Reference
EM2208544



Telephone: +61-3-8549 9600

RELINQUISHED BY: *Marta Agon* Name: *Marta Agon* Date: *11/5*
 Name: *Marta Agon* Of: *10-50*
 Name: _____ Date: _____
 Name: _____ Date: _____

METHOD OF SHIPMENT:
 Cor' Note No:
 Transport Co:

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

CERTIFICATE OF ANALYSIS

Work Order : **EM2208544**
Client : **AGON ENVIRONMENTAL PTY LTD**
Contact : Craig Trimbur
Address : D1.1 63-85 TURNER STREET
 PORT MELBOURNE 3207

Telephone : ----
Project : JC0927
Order number : ----
C-O-C number : 20220511043348-ALS-52
Sampler : HK - EP Risk Martha - Agon
Site : 20220511043348-ALS-52
Quote number : EN/150/19 -WGTP -Bulk Sample Quote
No. of samples received : 26
No. of samples analysed : 26

Page : 1 of 40
Laboratory : Environmental Division Melbourne
Contact : Josh Alexander
Address : 4 Westall Rd Springvale VIC Australia 3171

Telephone : +61-3-8549 9600
Date Samples Received : 11-May-2022 10:50
Date Analysis Commenced : 11-May-2022
Issue Date : 17-May-2022 16:53



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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

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



General Comments

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

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

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

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

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

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

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

- EP231X: Poor matrix spike recovery for sample EM2208217-072 due to sample matrix interference.
- EP231X: Poor matrix spike recovery for sample EM2208352-014 due to sample matrix interference.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP074-UT: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074-WF: Where reported, Sum of trichlorobenzenes is the sum of the reported concentrations of 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene, and 1,3,5-Trichlorobenzene at or above the LOR.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.
- EN60: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.
- EN60-DI: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS	SX_OB_20220510_11_54_SS_Primary_ALS	SX_OB_20220510_15_47_SS_Triplicate_ALS
Sampling date / time				10-May-2022 07:49	10-May-2022 07:50	10-May-2022 08:00	10-May-2022 11:54	10-May-2022 15:47
Compound	CAS Number	LOR	Unit	EM2208544-001	EM2208544-002	EM2208544-003	EM2208544-006	EM2208544-007
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS	SX_OB_20220510_11_54_SS_Primary_ALS	SX_OB_20220510_15_47_SS_Triplicate_ALS
Sampling date / time				10-May-2022 07:49	10-May-2022 07:50	10-May-2022 08:00	10-May-2022 11:54	10-May-2022 15:47
Compound	CAS Number	LOR	Unit	EM2208544-001	EM2208544-002	EM2208544-003	EM2208544-006	EM2208544-007
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	102	112	109	107	106
13C8-PFOA	----	0.02	%	95.5	96.8	90.6	93.6	93.1



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_IB_20220510_15_51_SS_Primary_ALS	SX_OB_20220510_15_55_SS_Primary_ALS	SX_OB_20220510_20_08_SS_Triplicate_ALS	SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220511_00_02_SS_Primary_ALS
Sampling date / time				10-May-2022 15:51	10-May-2022 15:55	10-May-2022 20:08	10-May-2022 20:10	11-May-2022 00:02
Compound	CAS Number	LOR	Unit	EM2208544-008	EM2208544-009	EM2208544-010	EM2208544-011	EM2208544-012
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_IB_20220510_15_51_SS_Primary_ALS	SX_OB_20220510_15_55_SS_Primary_ALS	SX_OB_20220510_20_08_SS_Triplicate_ALS	SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220511_00_02_SS_Primary_ALS
Sampling date / time				10-May-2022 15:51	10-May-2022 15:55	10-May-2022 20:08	10-May-2022 20:10	11-May-2022 00:02
Compound	CAS Number	LOR	Unit	EM2208544-008	EM2208544-009	EM2208544-010	EM2208544-011	EM2208544-012
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	104	115	110	117	121
13C8-PFOA	----	0.02	%	93.4	93.1	94.5	94.5	94.0



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

			SX_OB_20220511_00_09_SS_Primary_ALS	SX_OB_20220511_04_09_SS_Primary_ALS	----	----	----	
Sampling date / time			11-May-2022 00:09	11-May-2022 04:09	----	----	----	
Compound	CAS Number	LOR	Unit	EM2208544-013	EM2208544-014	-----	-----	-----
				Result	Result	---	---	---
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	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	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
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: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220511_00 _09_SS_Primary_ALS	SX_OB_20220511_04 _09_SS_Primary_ALS	----	----	----
Sampling date / time				11-May-2022 00:09	11-May-2022 04:09	----	----	----
Compound	CAS Number	LOR	Unit	EM2208544-013	EM2208544-014	-----	-----	-----
				Result	Result	---	---	---
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.10	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	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	117	102	----	----	----
13C8-PFOA	----	0.02	%	92.2	92.8	----	----	----



Analytical Results

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

Sample ID

				SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS	SX_OB_20220510_11_54_SS_Primary_ALS	SX_OB_20220510_15_47_SS_Triplicate_ALS
Sampling date / time				10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2208544-015	EM2208544-016	EM2208544-017	EM2208544-018	EM2208544-019
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

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

Sample ID

				SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS	SX_OB_20220510_11_54_SS_Primary_ALS	SX_OB_20220510_15_47_SS_Triplicate_ALS
Sampling date / time				10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2208544-015	EM2208544-016	EM2208544-017	EM2208544-018	EM2208544-019
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	94.8	92.9	91.5	89.1	88.2
13C8-PFOA	----	0.02	%	95.0	97.5	96.0	102	100



Analytical Results

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

Sample ID

				SX_IB_20220510_15_51_SS_Primary_ALS	SX_OB_20220510_15_55_SS_Primary_ALS	SX_OB_20220510_20_08_SS_Triplicate_ALS	SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220511_00_02_SS_Primary_ALS
Sampling date / time				10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00	11-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2208544-020	EM2208544-021	EM2208544-022	EM2208544-023	EM2208544-024
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

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

Sample ID

				SX_IB_20220510_15_51_SS_Primary_ALS	SX_OB_20220510_15_55_SS_Primary_ALS	SX_OB_20220510_20_08_SS_Triplicate_ALS	SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220511_00_02_SS_Primary_ALS
Sampling date / time				10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00	11-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2208544-020	EM2208544-021	EM2208544-022	EM2208544-023	EM2208544-024
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	95.0	87.8	87.6	93.6	90.2
13C8-PFOA	----	0.02	%	98.1	99.0	99.3	97.7	102



Analytical Results

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

Sample ID

			SX_OB_20220511_00 _09_SS_Primary_ALS	SX_OB_20220511_04 _09_SS_Primary_ALS	----	----	----	
Sampling date / time			11-May-2022 00:00	11-May-2022 00:00	----	----	----	
Compound	CAS Number	LOR	Unit	EM2208544-025	EM2208544-026	-----	-----	-----
				Result	Result	---	---	---
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	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	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
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: DI WATER LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220511_00 _09_SS_Primary_ALS	SX_OB_20220511_04 _09_SS_Primary_ALS	----	----	----
Sampling date / time				11-May-2022 00:00	11-May-2022 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EM2208544-025	EM2208544-026	-----	-----	-----
				Result	Result	---	---	---
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.10	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	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	87.7	88.5	----	----	----
13C8-PFOA	----	0.02	%	100	100	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS	SX_OB_20220510_11_54_SS_Primary_ALS	SX_OB_20220510_15_47_SS_Triplicate_ALS
Sampling date / time				10-May-2022 07:49	10-May-2022 07:50	10-May-2022 08:00	10-May-2022 11:54	10-May-2022 15:47
Compound	CAS Number	LOR	Unit	EM2208544-001	EM2208544-002	EM2208544-003	EM2208544-006	EM2208544-007
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	7.8	7.8	8.3	7.8	7.7
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	29.0	26.6	27.7	29.4	30.4
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	22	19	24	27	25
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	1
Chromium	7440-47-3	5	mg/kg	109	90	86	120	92
Copper	7440-50-8	5	mg/kg	65	68	54	79	70
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	178	161	177	230	236
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	106	107	114	145	122
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	1.3	<1.0	1.1
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	5	mg/kg	<5	<5	<5	<5	<5
EK040T: Fluoride Total								
Fluoride	16984-48-8	100	mg/kg	130	120	130	140	150
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Extraction Fluid pH	----	0.1	pH Unit	5	5	5	5	5
Final pH	----	0.1	pH Unit	5.1	5.1	5.1	5.1	5.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS	SX_OB_20220510_11_54_SS_Primary_ALS	SX_OB_20220510_15_47_SS_Triplicate_ALS
Sampling date / time				10-May-2022 07:49	10-May-2022 07:50	10-May-2022 08:00	10-May-2022 11:54	10-May-2022 15:47
Compound	CAS Number	LOR	Unit	EM2208544-001	EM2208544-002	EM2208544-003	EM2208544-006	EM2208544-007
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP074I: Volatile Halogenated Compounds								
Vinyl chloride	75-01-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethene	75-35-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	156-60-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene	156-59-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	67-66-3	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	71-55-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride	56-23-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	107-06-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethene	79-01-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	79-00-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethene	127-18-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	630-20-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	79-34-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Hexachlorobutadiene	87-68-3	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Chlorobenzene	108-90-7	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	106-46-7	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichlorobenzene	95-50-1	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,2,4-Trichlorobenzene	120-82-1	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
^ Sum of volatile chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
^ Sum of other chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
EP075A: Phenolic Compounds (Halogenated)								
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_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS	SX_OB_20220510_11_54_SS_Primary_ALS	SX_OB_20220510_15_47_SS_Triplicate_ALS
Sampling date / time				10-May-2022 07:49	10-May-2022 07:50	10-May-2022 08:00	10-May-2022 11:54	10-May-2022 15:47
Compound	CAS Number	LOR	Unit	EM2208544-001	EM2208544-002	EM2208544-003	EM2208544-006	EM2208544-007
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Halogenated) - Continued								
2,6-Dichlorophenol	87-65-0	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,4,5-Trichlorophenol	95-95-4	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
EP075A: Phenolic Compounds (Non-halogenated)								
Phenol	108-95-2	1	mg/kg	<1	<1	<1	<1	<1
2-Methylphenol	95-48-7	1	mg/kg	<1	<1	<1	<1	<1
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	<1	<1	<1
2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	<1	<1	<1
2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	<5	<5	<5
4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	<5	<5	<5
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	<5	<5	<5
Dinoseb	88-85-7	20	mg/kg	<20	<20	<20	<20	<20
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	20	mg/kg	<20	<20	<20	<20	<20
^ Sum of Phenols (non-halogenated)	----	20	mg/kg	<20	<20	<20	<20	<20
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS	SX_OB_20220510_11_54_SS_Primary_ALS	SX_OB_20220510_15_47_SS_Triplicate_ALS
Sampling date / time				10-May-2022 07:49	10-May-2022 07:50	10-May-2022 08:00	10-May-2022 11:54	10-May-2022 15:47
Compound	CAS Number	LOR	Unit	EM2208544-001	EM2208544-002	EM2208544-003	EM2208544-006	EM2208544-007
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Endosulfan 1	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan 2	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of organochlorine pesticides	----	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.30	mg/kg	<0.30	<0.30	<0.30	<0.30	<0.30



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS	SX_OB_20220510_11_54_SS_Primary_ALS	SX_OB_20220510_15_47_SS_Triplicate_ALS
Sampling date / time				10-May-2022 07:49	10-May-2022 07:50	10-May-2022 08:00	10-May-2022 11:54	10-May-2022 15:47
Compound	CAS Number	LOR	Unit	EM2208544-001	EM2208544-002	EM2208544-003	EM2208544-006	EM2208544-007
				Result	Result	Result	Result	Result
EP075I: Organochlorine Pesticides - Continued								
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	mg/kg	<20	<20	<20	<20	<20
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C6 - C10 Fraction	C6_C10	20	mg/kg	<20	<20	<20	<20	<20
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	mg/kg	<20	<20	<20	<20	<20
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorodecane sulfonic acid (PFDS)	335-77-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
EP231B: Perfluoroalkyl Carboxylic Acids								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS	SX_OB_20220510_11_54_SS_Primary_ALS	SX_OB_20220510_15_47_SS_Triplicate_ALS
Sampling date / time				10-May-2022 07:49	10-May-2022 07:50	10-May-2022 08:00	10-May-2022 11:54	10-May-2022 15:47
Compound	CAS Number	LOR	Unit	EM2208544-001	EM2208544-002	EM2208544-003	EM2208544-006	EM2208544-007
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorobutanoic acid (PFBA)	375-22-4	5	µg/kg	<5	<5	<5	<5	<5
Perfluoropentanoic acid (PFPeA)	2706-90-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorohexanoic acid (PFHxA)	307-24-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoroheptanoic acid (PFHpA)	375-85-9	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorooctanoic acid (PFOA)	335-67-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorononanoic acid (PFNA)	375-95-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorodecanoic acid (PFDA)	335-76-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorododecanoic acid (PFDoDA)	307-55-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
EP231D: (n:2) Fluorotelomer Sulfonic Acids								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS	SX_OB_20220510_11_54_SS_Primary_ALS	SX_OB_20220510_15_47_SS_Triplicate_ALS
Sampling date / time				10-May-2022 07:49	10-May-2022 07:50	10-May-2022 08:00	10-May-2022 11:54	10-May-2022 15:47
Compound	CAS Number	LOR	Unit	EM2208544-001	EM2208544-002	EM2208544-003	EM2208544-006	EM2208544-007
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
EP231P: PFAS Sums								
Sum of PFAS	----	50.0	µg/kg	<50.0	<50.0	<50.0	<50.0	<50.0
Sum of PFHxS and PFOS	355-46-4/1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Sum of PFAS (WA DER List)	----	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	114	118	106	114	108
EP074S: VOC Surrogates (Ultra-Trace)								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	86.7	79.4	87.7	86.6	100
Toluene-D8	2037-26-5	0.1	%	79.1	69.8	79.4	81.1	92.1
4-Bromofluorobenzene	460-00-4	0.1	%	85.0	82.3	89.4	89.2	97.0
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	107	119	104	110	101
2-Chlorophenol-D4	93951-73-6	0.025	%	97.2	109	93.6	101	91.5
2,4,6-Tribromophenol	118-79-6	0.025	%	91.2	97.4	86.1	92.3	86.6
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								
Nitrobenzene-D5	4165-60-0	0.025	%	105	106	99.0	100	99.2
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	93.1	99.3	89.3	94.7	87.2
2-Fluorobiphenyl	321-60-8	0.025	%	111	117	104	112	106
Anthracene-d10	1719-06-8	0.025	%	102	110	96.7	103	97.6
4-Terphenyl-d14	1718-51-0	0.025	%	109	115	103	112	105
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	95.8	109	99.4	86.6	96.8
13C8-PFOA	----	0.0002	%	102	103	111	101	104



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220510_15_51_SS_Primary_ALS	SX_OB_20220510_15_55_SS_Primary_ALS	SX_OB_20220510_20_08_SS_Triplicate_ALS	SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220511_00_02_SS_Primary_ALS
Sampling date / time				10-May-2022 15:51	10-May-2022 15:55	10-May-2022 20:08	10-May-2022 20:10	11-May-2022 00:02
Compound	CAS Number	LOR	Unit	EM2208544-008	EM2208544-009	EM2208544-010	EM2208544-011	EM2208544-012
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	8.6	7.7	7.9	7.9	7.8
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	31.6	29.6	36.2	28.6	29.9
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	38	28	26	19	31
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	5	mg/kg	110	101	144	94	123
Copper	7440-50-8	5	mg/kg	75	66	76	58	71
Lead	7439-92-1	5	mg/kg	6	<5	<5	<5	<5
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	<5	<5
Nickel	7440-02-0	5	mg/kg	183	182	259	160	179
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	118	113	156	104	130
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	5	mg/kg	<5	<5	<5	<5	<5
EK040T: Fluoride Total								
Fluoride	16984-48-8	100	mg/kg	120	140	150	170	190
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Extraction Fluid pH	----	0.1	pH Unit	5	5	5	5	5
Final pH	----	0.1	pH Unit	5.2	5.1	5.1	5.1	5.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220510_15_51_SS_Primary_ALS	SX_OB_20220510_15_55_SS_Primary_ALS	SX_OB_20220510_20_08_SS_Triplicate_ALS	SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220511_00_02_SS_Primary_ALS
Sampling date / time				10-May-2022 15:51	10-May-2022 15:55	10-May-2022 20:08	10-May-2022 20:10	11-May-2022 00:02
Compound	CAS Number	LOR	Unit	EM2208544-008	EM2208544-009	EM2208544-010	EM2208544-011	EM2208544-012
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP074I: Volatile Halogenated Compounds								
Vinyl chloride	75-01-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethene	75-35-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	156-60-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene	156-59-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	67-66-3	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	71-55-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride	56-23-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	107-06-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethene	79-01-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	79-00-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethene	127-18-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	630-20-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	79-34-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Hexachlorobutadiene	87-68-3	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
Chlorobenzene	108-90-7	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	106-46-7	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichlorobenzene	95-50-1	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
1,2,4-Trichlorobenzene	120-82-1	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
^ Sum of volatile chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
^ Sum of other chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
EP075A: Phenolic Compounds (Halogenated)								
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_IB_20220510_15_51_SS_Primary_ALS	SX_OB_20220510_15_55_SS_Primary_ALS	SX_OB_20220510_20_08_SS_Triplicate_ALS	SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220511_00_02_SS_Primary_ALS
Sampling date / time				10-May-2022 15:51	10-May-2022 15:55	10-May-2022 20:08	10-May-2022 20:10	11-May-2022 00:02
Compound	CAS Number	LOR	Unit	EM2208544-008	EM2208544-009	EM2208544-010	EM2208544-011	EM2208544-012
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Halogenated) - Continued								
2,6-Dichlorophenol	87-65-0	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,4,5-Trichlorophenol	95-95-4	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
EP075A: Phenolic Compounds (Non-halogenated)								
Phenol	108-95-2	1	mg/kg	<1	<1	<1	<1	<1
2-Methylphenol	95-48-7	1	mg/kg	<1	<1	<1	<1	<1
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	<1	<1	<1
2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	<1	<1	<1
2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	<5	<5	<5
4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	<5	<5	<5
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	<5	<5	<5
Dinoseb	88-85-7	20	mg/kg	<20	<20	<20	<20	<20
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	20	mg/kg	<20	<20	<20	<20	<20
^ Sum of Phenols (non-halogenated)	----	20	mg/kg	<20	<20	<20	<20	<20
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220510_15_51_SS_Primary_ALS	SX_OB_20220510_15_55_SS_Primary_ALS	SX_OB_20220510_20_08_SS_Triplicate_ALS	SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220511_00_02_SS_Primary_ALS
Sampling date / time				10-May-2022 15:51	10-May-2022 15:55	10-May-2022 20:08	10-May-2022 20:10	11-May-2022 00:02
Compound	CAS Number	LOR	Unit	EM2208544-008	EM2208544-009	EM2208544-010	EM2208544-011	EM2208544-012
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Endosulfan 1	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan 2	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of organochlorine pesticides	----	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.30	mg/kg	<0.30	<0.30	<0.30	<0.30	<0.30



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220510_15_51_SS_Primary_ALS	SX_OB_20220510_15_55_SS_Primary_ALS	SX_OB_20220510_20_08_SS_Triplicate_ALS	SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220511_00_02_SS_Primary_ALS
Sampling date / time				10-May-2022 15:51	10-May-2022 15:55	10-May-2022 20:08	10-May-2022 20:10	11-May-2022 00:02
Compound	CAS Number	LOR	Unit	EM2208544-008	EM2208544-009	EM2208544-010	EM2208544-011	EM2208544-012
				Result	Result	Result	Result	Result
EP075I: Organochlorine Pesticides - Continued								
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	mg/kg	<20	<20	<20	<20	<20
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C6 - C10 Fraction	C6_C10	20	mg/kg	<20	<20	<20	<20	<20
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	mg/kg	<20	<20	<20	<20	<20
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorodecane sulfonic acid (PFDS)	335-77-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
EP231B: Perfluoroalkyl Carboxylic Acids								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220510_15_51_SS_Primary_ALS	SX_OB_20220510_15_55_SS_Primary_ALS	SX_OB_20220510_20_08_SS_Triplicate_ALS	SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220511_00_02_SS_Primary_ALS
Sampling date / time				10-May-2022 15:51	10-May-2022 15:55	10-May-2022 20:08	10-May-2022 20:10	11-May-2022 00:02
Compound	CAS Number	LOR	Unit	EM2208544-008	EM2208544-009	EM2208544-010	EM2208544-011	EM2208544-012
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorobutanoic acid (PFBA)	375-22-4	5	µg/kg	<5	<5	<5	<5	<5
Perfluoropentanoic acid (PFPeA)	2706-90-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorohexanoic acid (PFHxA)	307-24-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoroheptanoic acid (PFHpA)	375-85-9	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorooctanoic acid (PFOA)	335-67-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorononanoic acid (PFNA)	375-95-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorodecanoic acid (PFDA)	335-76-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorododecanoic acid (PFDoDA)	307-55-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
EP231D: (n:2) Fluorotelomer Sulfonic Acids								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220510_15_51_SS_Primary_ALS	SX_OB_20220510_15_55_SS_Primary_ALS	SX_OB_20220510_20_08_SS_Triplicate_ALS	SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220511_00_02_SS_Primary_ALS
Sampling date / time				10-May-2022 15:51	10-May-2022 15:55	10-May-2022 20:08	10-May-2022 20:10	11-May-2022 00:02
Compound	CAS Number	LOR	Unit	EM2208544-008	EM2208544-009	EM2208544-010	EM2208544-011	EM2208544-012
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
EP231P: PFAS Sums								
Sum of PFAS	----	50.0	µg/kg	<50.0	<50.0	<50.0	<50.0	<50.0
Sum of PFHxS and PFOS	355-46-4/1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0
Sum of PFAS (WA DER List)	----	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	105	115	111	104	108
EP074S: VOC Surrogates (Ultra-Trace)								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	89.2	94.3	89.6	93.5	101
Toluene-D8	2037-26-5	0.1	%	83.9	90.6	85.8	89.8	94.6
4-Bromofluorobenzene	460-00-4	0.1	%	90.0	96.3	93.0	95.0	99.5
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	103	117	110	101	104
2-Chlorophenol-D4	93951-73-6	0.025	%	92.1	106	97.8	91.4	94.0
2,4,6-Tribromophenol	118-79-6	0.025	%	85.7	94.5	91.7	81.9	88.8
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								
Nitrobenzene-D5	4165-60-0	0.025	%	93.7	103	105	89.6	103
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	86.2	96.6	93.7	83.5	89.2
2-Fluorobiphenyl	321-60-8	0.025	%	104	116	111	101	109
Anthracene-d10	1719-06-8	0.025	%	96.1	108	102	92.6	101
4-Terphenyl-d14	1718-51-0	0.025	%	103	114	110	99.9	107
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	93.2	99.7	102	103	106
13C8-PFOA	----	0.0002	%	96.3	109	109	99.7	112



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220511_00_09_SS_Primary_ALS	SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS
Sampling date / time				11-May-2022 00:09	11-May-2022 04:09	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2208544-013	EM2208544-014	EM2208544-015	EM2208544-016	EM2208544-017
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl ₂)	----	0.1	pH Unit	7.8	7.8	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	29.5	32.4	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	20	32	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	----	----
Chromium	7440-47-3	5	mg/kg	94	137	----	----	----
Copper	7440-50-8	5	mg/kg	58	102	----	----	----
Lead	7439-92-1	5	mg/kg	<5	<5	----	----	----
Molybdenum	7439-98-7	5	mg/kg	<5	<5	----	----	----
Nickel	7440-02-0	5	mg/kg	148	219	----	----	----
Selenium	7782-49-2	5	mg/kg	<5	<5	----	----	----
Silver	7440-22-4	2	mg/kg	<2	<2	----	----	----
Tin	7440-31-5	10	mg/kg	<10	<10	----	----	----
Zinc	7440-66-6	5	mg/kg	96	226	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	----	----
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	<1.0	----	----	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	5	mg/kg	<5	<5	----	----	----
EK040T: Fluoride Total								
Fluoride	16984-48-8	100	mg/kg	150	220	----	----	----
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Extraction Fluid pH	----	0.1	pH Unit	5	5	----	----	----
Final pH	----	0.1	pH Unit	5.1	5.1	----	----	----
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Final pH	----	0.1	pH Unit	----	----	9.1	9.2	9.8
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220511_00_09_SS_Primary_ALS	SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS
Sampling date / time				11-May-2022 00:09	11-May-2022 04:09	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2208544-013	EM2208544-014	EM2208544-015	EM2208544-016	EM2208544-017
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	----	----
EP074I: Volatile Halogenated Compounds								
Vinyl chloride	75-01-4	0.50	mg/kg	<0.50	<0.50	----	----	----
1,1-Dichloroethene	75-35-4	0.50	mg/kg	<0.50	<0.50	----	----	----
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	----	----	----
trans-1,2-Dichloroethene	156-60-5	0.50	mg/kg	<0.50	<0.50	----	----	----
cis-1,2-Dichloroethene	156-59-2	0.50	mg/kg	<0.50	<0.50	----	----	----
Chloroform	67-66-3	0.50	mg/kg	<0.50	<0.50	----	----	----
1,1,1-Trichloroethane	71-55-6	0.50	mg/kg	<0.50	<0.50	----	----	----
Carbon Tetrachloride	56-23-5	0.50	mg/kg	<0.50	<0.50	----	----	----
1,2-Dichloroethane	107-06-2	0.50	mg/kg	<0.50	<0.50	----	----	----
Trichloroethene	79-01-6	0.50	mg/kg	<0.50	<0.50	----	----	----
1,1,2-Trichloroethane	79-00-5	0.50	mg/kg	<0.50	<0.50	----	----	----
Tetrachloroethene	127-18-4	0.50	mg/kg	<0.50	<0.50	----	----	----
1,1,1,2-Tetrachloroethane	630-20-6	0.50	mg/kg	<0.50	<0.50	----	----	----
1,1,2,2-Tetrachloroethane	79-34-5	0.50	mg/kg	<0.50	<0.50	----	----	----
Hexachlorobutadiene	87-68-3	0.50	mg/kg	<0.50	<0.50	----	----	----
Chlorobenzene	108-90-7	0.50	mg/kg	<0.50	<0.50	----	----	----
1,4-Dichlorobenzene	106-46-7	0.50	mg/kg	<0.50	<0.50	----	----	----
1,2-Dichlorobenzene	95-50-1	0.50	mg/kg	<0.50	<0.50	----	----	----
1,2,4-Trichlorobenzene	120-82-1	0.50	mg/kg	<0.50	<0.50	----	----	----
^ Sum of volatile chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	----	----	----
^ Sum of other chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	----	----	----
EP075A: Phenolic Compounds (Halogenated)								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220511_00_09_SS_Primary_ALS	SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS
Sampling date / time				11-May-2022 00:09	11-May-2022 04:09	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2208544-013	EM2208544-014	EM2208544-015	EM2208544-016	EM2208544-017
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Halogenated) - Continued								
2-Chlorophenol	95-57-8	0.50	mg/kg	<0.50	<0.50	----	----	----
2,4-Dichlorophenol	120-83-2	0.50	mg/kg	<0.50	<0.50	----	----	----
2,6-Dichlorophenol	87-65-0	0.50	mg/kg	<0.50	<0.50	----	----	----
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<1.00	<1.00	----	----	----
2,4,5-Trichlorophenol	95-95-4	1.00	mg/kg	<1.00	<1.00	----	----	----
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<1.00	<1.00	----	----	----
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	----	----	----
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	----	----	----
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	<1.0	----	----	----
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<1.00	<1.00	----	----	----
EP075A: Phenolic Compounds (Non-halogenated)								
Phenol	108-95-2	1	mg/kg	<1	<1	----	----	----
2-Methylphenol	95-48-7	1	mg/kg	<1	<1	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	----	----	----
2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	----	----	----
2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	----	----	----
2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	----	----	----
4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	----	----	----
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	----	----	----
Dinoseb	88-85-7	20	mg/kg	<20	<20	----	----	----
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	20	mg/kg	<20	<20	----	----	----
^ Sum of Phenols (non-halogenated)	----	20	mg/kg	<20	<20	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220511_00_09_SS_Primary_ALS	SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS
Sampling date / time				11-May-2022 00:09	11-May-2022 04:09	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2208544-013	EM2208544-014	EM2208544-015	EM2208544-016	EM2208544-017
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	----	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	----	----	----
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	----	----	----
Endosulfan 1	959-98-8	0.05	mg/kg	<0.05	<0.05	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Endosulfan 2	33213-65-9	0.05	mg/kg	<0.05	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	----	----	----
4.4`-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	----	----	----
Methoxychlor	72-43-5	0.05	mg/kg	<0.05	<0.05	----	----	----
^ Sum of organochlorine pesticides	----	0.10	mg/kg	<0.10	<0.10	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220511_00_09_SS_Primary_ALS	SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS
Sampling date / time				11-May-2022 00:09	11-May-2022 04:09	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2208544-013	EM2208544-014	EM2208544-015	EM2208544-016	EM2208544-017
				Result	Result	Result	Result	Result
EP075I: Organochlorine Pesticides - Continued								
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.30	mg/kg	<0.30	<0.30	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	----	----	----
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	----	----	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	mg/kg	<20	<20	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	----	----
C6 - C10 Fraction	C6_C10	20	mg/kg	<20	<20	----	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	----
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	----	----	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	mg/kg	<20	<20	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	5.0	µg/kg	<5.0	<5.0	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220511_00_09_SS_Primary_ALS	SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS
Sampling date / time				11-May-2022 00:09	11-May-2022 04:09	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2208544-013	EM2208544-014	EM2208544-015	EM2208544-016	EM2208544-017
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	5	µg/kg	<5	<5	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	5.0	µg/kg	<5.0	<5.0	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	5.0	µg/kg	<5.0	<5.0	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	5.0	µg/kg	<5.0	<5.0	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	5.0	µg/kg	<5.0	<5.0	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	5.0	µg/kg	<5.0	<5.0	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	5.0	µg/kg	<5.0	<5.0	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	5.0	µg/kg	<5.0	<5.0	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	10.0	µg/kg	<10.0	<10.0	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	10.0	µg/kg	<10.0	<10.0	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220511_00_09_SS_Primary_ALS	SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220510_07_49_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS	SX_IB_20220510_08_00_SS_Primary_ALS
Sampling date / time				11-May-2022 00:09	11-May-2022 04:09	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2208544-013	EM2208544-014	EM2208544-015	EM2208544-016	EM2208544-017
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	5.0	µg/kg	<5.0	<5.0	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10.0	µg/kg	<10.0	<10.0	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	5.0	µg/kg	<5.0	<5.0	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	5.0	µg/kg	<5.0	<5.0	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	50.0	µg/kg	<50.0	<50.0	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	5.0	µg/kg	<5.0	<5.0	----	----	----
Sum of PFAS (WA DER List)	----	10.0	µg/kg	<10.0	<10.0	----	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	90.2	119	----	----	----
EP074S: VOC Surrogates (Ultra-Trace)								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	96.6	90.7	----	----	----
Toluene-D8	2037-26-5	0.1	%	89.7	84.3	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	97.1	91.0	----	----	----
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	73.9	115	----	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%	70.7	102	----	----	----
2,4,6-Tribromophenol	118-79-6	0.025	%	61.6	89.4	----	----	----
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								
Nitrobenzene-D5	4165-60-0	0.025	%	77.1	109	----	----	----
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	70.9	102	----	----	----
2-Fluorobiphenyl	321-60-8	0.025	%	69.0	101	----	----	----
Anthracene-d10	1719-06-8	0.025	%	70.2	101	----	----	----
4-Terphenyl-d14	1718-51-0	0.025	%	67.0	102	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	81.8	89.6	----	----	----
13C8-PFOA	----	0.0002	%	99.6	102	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220510_11_54_SS_Primary_ALS	SX_OB_20220510_15_47_SS_Triplicate_ALS	SX_IB_20220510_15_51_SS_Primary_ALS	SX_OB_20220510_15_55_SS_Primary_ALS	SX_OB_20220510_20_08_SS_Triplicate_ALS
Sampling date / time				10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00	10-May-2022 00:00
Compound	CAS Number	LOR	Unit	EM2208544-018	EM2208544-019	EM2208544-020	EM2208544-021	EM2208544-022
				Result	Result	Result	Result	Result
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Final pH	----	0.1	pH Unit	9.1	9.1	10.1	9.2	9.0



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220510_20 _10_SS_Primary_ALS	SX_OB_20220511_00 _02_SS_Primary_ALS	SX_OB_20220511_00 _09_SS_Primary_ALS	SX_OB_20220511_04 _09_SS_Primary_ALS	----
Sampling date / time				10-May-2022 00:00	11-May-2022 00:00	11-May-2022 00:00	11-May-2022 00:00	----
Compound	CAS Number	LOR	Unit	EM2208544-023	EM2208544-024	EM2208544-025	EM2208544-026	-----
				Result	Result	Result	Result	----
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Final pH	----	0.1	pH Unit	9.3	9.1	9.3	9.1	----



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID		SX_OB_20220510_09 _04_SR_Rinsate_ALS	SX_OB_20220510_09 _10_SB_Blank_ALS	----	----	----
Sampling date / time			10-May-2022 09:04		10-May-2022 09:10		----	----	----
Compound	CAS Number	LOR	Unit	EM2208544-004	EM2208544-005	-----	-----	-----	
				Result	Result	---	---	---	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	----	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----	
EP231C: Perfluoroalkyl Sulfonamides									
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_20220510_09 _04_SR_Rinsate_ALS	SX_OB_20220510_09 _10_SB_Blank_ALS	----	----	----
Sampling date / time				10-May-2022 09:04	10-May-2022 09:10	----	----	----	
Compound	CAS Number	LOR	Unit	EM2208544-004	EM2208544-005	-----	-----	-----	
				Result	Result	---	---	---	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	----	----	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	----	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	----	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	----	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	----	----	----	
EP231P: PFAS Sums									
Sum of PFAS	----	0.10	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	----	----	----	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%	97.7	94.8	----	----	----	
13C8-PFOA	----	0.02	%	96.4	100	----	----	----	



Surrogate Control Limits

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

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

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

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

QUALITY CONTROL REPORT

Work Order	: EM2208544	Page	: 1 of 45
Client	: AGON ENVIRONMENTAL PTY LTD	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	: 11-May-2022
Order number	: ----	Date Analysis Commenced	: 11-May-2022
C-O-C number	: 20220511043348-ALS-52	Issue Date	: 17-May-2022
Sampler	: HK - EP Risk Martha - Agon		
Site	: 20220511043348-ALS-52		
Quote number	: EN/150/19 -WGTP -Bulk Sample Quote		
No. of samples received	: 26		
No. of samples analysed	: 26		



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

This Quality Control Report contains the following information:

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

Signatories

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

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



General Comments

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

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4337660)									
EM2208523-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	119	119	0.0	0% - 20%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	174	196	11.6	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	24	22	7.2	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	69	67	3.9	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	109	117	6.8	0% - 20%
EM2208523-010	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	114	114	0.0	0% - 20%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	160	170	5.9	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	53	46	14.3	0% - 50%
		EG005T: Copper	7440-50-8	5	mg/kg	57	56	2.8	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	97	100	2.4	0% - 50%
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4337663)									



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 (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4337663) - continued									
EM2208544-013	SX_OB_20220511_00_09_ 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	90	4.7	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	148	158	6.7	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	20	19	5.2	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	58	59	2.5	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	96	100	4.0	0% - 50%
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4338897)									
EM2208523-005	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.8	7.9	0.0	0% - 20%
EM2208544-006	SX_OB_20220510_11_54_ SS_Primary_ALS	EA001: pH (CaCl2)	----	0.1	pH Unit	7.8	7.7	0.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4337906)									
EM2208523-001	Anonymous	EA055: Moisture Content	----	0.1	%	33.0	32.5	1.6	0% - 20%
EM2208544-001	SX_OB_20220510_07_49_ SS_Primary_ALS	EA055: Moisture Content	----	0.1	%	29.0	26.0	11.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4337907)									
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	EA055: Moisture Content	----	0.1	%	29.5	28.6	2.8	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4337661)									
EM2208523-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2208523-010	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4337662)									
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 4336917)									
EM2208523-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
EM2208523-010	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	1.7	1.7	0.0	No Limit
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 4336918)									
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4337553)									
EM2208523-009	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<5	<5	0.0	No Limit
EM2208472-007	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4337555)									



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 (%)
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4337555) - continued									
EM2208544-012	SX_OB_20220511_00_02_ SS_Primary_ALS	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<5	<5	0.0	No Limit
EM2208665-007	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EK040T: Fluoride Total (QC Lot: 4336911)									
EM2208523-001	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	170	180	0.0	No Limit
EM2208523-010	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	190	170	13.8	No Limit
EK040T: Fluoride Total (QC Lot: 4336912)									
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	EK040T: Fluoride	16984-48-8	40	mg/kg	150	170	9.2	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4335079)									
EM2208523-001	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2208544-001	SX_OB_20220510_07_49_ SS_Primary_ALS	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4335088)									
EM2208317-008	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4334289)									
EM2208544-001	SX_OB_20220510_07_49_ SS_Primary_ALS	EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074H: Naphthalene (QC Lot: 4334289)									
EM2208544-001	SX_OB_20220510_07_49_ SS_Primary_ALS	EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP074I: Volatile Halogenated Compounds (QC Lot: 4334289)									
EM2208544-001	SX_OB_20220510_07_49_ 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		
EM2208544-013	SX_OB_20220511_00_09_ 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		



Sub-Matrix: SOIL

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075A: Phenolic Compounds (Halogenated) (QC Lot: 4335081)									
EM2208523-001	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-9 0-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EM2208544-001	SX_OB_20220510_07_49_ SS_Primary_ALS	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-9 0-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EM2208317-008	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
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	0.0	No Limit



Sub-Matrix: SOIL

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075A: Phenolic Compounds (Halogenated) (QC Lot: 4335087) - continued									
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-9 0-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit
EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4335081)									
EM2208523-001	Anonymous	EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: Dinoseb	88-85-7	5	mg/kg	<20	<20	0.0	No Limit
EM2208544-001	SX_OB_20220510_07_49_ SS_Primary_ALS	EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: Dinoseb	88-85-7	5	mg/kg	<20	<20	0.0	No Limit
EM2208317-008	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
EM2208544-013	SX_OB_20220511_00_09_ 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



Sub-Matrix: SOIL

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4335087) - continued									
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	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
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4335081)									
EM2208523-001	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
		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
EM2208544-001	SX_OB_20220510_07_49_ SS_Primary_ALS	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4335081) - continued									
EM2208544-001	SX_OB_20220510_07_49_ SS_Primary_ALS	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
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4335087)									
EM2208317-008	Anonymous	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	<1.0	0.0	No Limit
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	<1.0	0.0	No Limit
EP075I: Organochlorine Pesticides (QC Lot: 4335081)									
EM2208523-001	Anonymous	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.05	<0.05	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075I: Organochlorine Pesticides (QC Lot: 4335081) - continued									
EM2208523-001	Anonymous	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		
EM2208544-001	SX_OB_20220510_07_49_ SS_Primary_ALS	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		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		
EP075I: Organochlorine Pesticides (QC Lot: 4335087)									
EM2208317-008	Anonymous	EP075-EM: alpha-BHC	319-84-6	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 (%)
EP075I: Organochlorine Pesticides (QC Lot: 4335087) - continued									
EM2208317-008	Anonymous	EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4,4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EM2208544-013	SX_OB_20220511_00_09_ 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		



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4334289)									
EM2208544-001	SX_OB_20220510_07_49_ SS_Primary_ALS	EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<20	<20	0.0	No Limit
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<20	<20	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4335080)									
EM2208523-001	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
EM2208544-001	SX_OB_20220510_07_49_ SS_Primary_ALS	EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4335089)									
EM2208317-008	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
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4334289)									
EM2208544-001	SX_OB_20220510_07_49_ 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
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<20	<20	0.0	No Limit
		EP074-UT: C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4335080)									
EM2208523-001	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
EM2208544-001	SX_OB_20220510_07_49_ SS_Primary_ALS	EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4335080) - continued									
EM2208544-001	SX_OB_20220510_07_49_ SS_Primary_ALS	EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4335089)									
EM2208317-008	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
EM2208544-013	SX_OB_20220511_00_09_ SS_Primary_ALS	EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4337822)									
EM2208198-082	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
EM2208470-013	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	0.0011	0.0012	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4339557)									
EM2208352-007	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	0.0009	0.0008	14.4	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0013	0.0010	22.8	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0064	0.0052	19.6	0% - 20%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0018	0.0015	18.5	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0731	0.0641	13.0	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2208544-002	SX_OB_20220510_07_50_ SS_Duplicate_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4337822)									



Sub-Matrix: SOIL

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4337822) - continued									
EM2208198-082	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
EM2208470-013	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
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4339557)									
EM2208352-007	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	0.0028	0.0026	6.9	0% - 50%
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0035	0.0030	15.5	0% - 50%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0033	0.0032	0.0	0% - 50%
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0126	0.0117	7.6	0% - 20%
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	0.0038	0.0029	24.0	0% - 50%
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	0.0031	0.0025	19.5	0% - 50%
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	0.0008	0.0005	38.4	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	0.0004	0.0002	52.8	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
EM2208544-002	SX_OB_20220510_07_50_ SS_Duplicate_ALS	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit



Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4339557) - continued									
EM2208544-002	SX_OB_20220510_07_50_ SS_Duplicate_ALS	EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<5 µg/kg	<0.005	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4337822)									
EM2208198-082	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
		EM2208470-013	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002
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
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4339557)									
EM2208352-007	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	0.0023	0.0014	46.8	0% - 50%
		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	0.0016	0.0016	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 (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4339557) - continued									
EM2208352-007	Anonymous	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
EM2208544-002	SX_OB_20220510_07_50_SS_Duplicate_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4337822)									
EM2208198-082	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
EM2208470-013	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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4339557)									



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4339557) - continued									
EM2208352-007	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
EM2208544-002	SX_OB_20220510_07_50_SS_Duplicate_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4337822)									
EM2208198-082	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
EM2208470-013	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0013	0.0014	7.4	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0011	0.0012	8.7	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0011	0.0012	8.7	No Limit
EP231P: PFAS Sums (QC Lot: 4339557)									
EM2208352-007	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.119	0.103	14.0	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0795	0.0693	13.7	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.104	0.0916	12.3	0% - 20%
EM2208544-002	SX_OB_20220510_07_50_SS_Duplicate_ALS	EP231X: Sum of PFAS	----	0.0002	mg/kg	<50.0 µg/kg	<0.0500	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
Sub-Matrix: WATER									
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4335947)									
EM2208385-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.07	0.08	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.11	0.12	0.0	0% - 50%



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4335947) - continued									
EM2208385-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2208385-006	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.08	0.07	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.12	0.14	17.7	0% - 50%
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4338811)									
EM2208544-023	SX_OB_20220510_20_10_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
EM2208544-025	SX_OB_20220511_00_09_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
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4339436)									
EM2208544-013	SX_OB_20220511_00_09_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
EM2208544-012	SX_OB_20220511_00_02_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



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4335947)									
EM2208385-001	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
EM2208385-006	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4338811)									
EM2208544-023	SX_OB_20220510_20_10_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
EM2208544-025	SX_OB_20220511_00_09_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



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4338811) - continued									
EM2208544-025	SX_OB_20220511_00_09_ SS_Primary_ALS	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: 4339436)									
EM2208544-013	SX_OB_20220511_00_09_ 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
EM2208544-012	SX_OB_20220511_00_02_ 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
EM2208385-001	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



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4335947) - continued									
EM2208385-001	Anonymous	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
EM2208385-006	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		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: 4338811)									
EM2208544-023	SX_OB_20220510_20_10_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
EM2208544-025	SX_OB_20220511_00_09_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



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4338811) - continued									
EM2208544-025	SX_OB_20220511_00_09_ SS_Primary_ALS	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4339436)									
EM2208544-013	SX_OB_20220511_00_09_ 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
EM2208544-012	SX_OB_20220511_00_02_ 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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4335947)									



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4335947) - continued									
EM2208385-001	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
EM2208385-006	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4338811)									
EM2208544-023	SX_OB_20220510_20_10_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
EM2208544-025	SX_OB_20220511_00_09_SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4339436)									
EM2208544-013	SX_OB_20220511_00_09_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



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4339436) - continued									
EM2208544-013	SX_OB_20220511_00_09_SS_Primary_ALS	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2208544-012	SX_OB_20220511_00_02_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
EP231P: PFAS Sums (QC Lot: 4335947)									
EM2208385-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.18	0.20	10.5	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.18	0.20	10.5	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	0.18	0.20	10.5	0% - 20%
EM2208385-006	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.20	0.21	4.9	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.20	0.21	4.9	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	0.20	0.21	4.9	0% - 20%
EP231P: PFAS Sums (QC Lot: 4338811)									
EM2208544-023	SX_OB_20220510_20_10_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
EM2208544-025	SX_OB_20220511_00_09_SS_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4339436)									
EM2208544-013	SX_OB_20220511_00_09_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
EM2208544-012	SX_OB_20220511_00_02_SS_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit

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Work Order : EM2208544
Client : AGON ENVIRONMENTAL PTY LTD
Project : JC0927





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

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

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4337660)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	98.8	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	54.6	50.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	96.0	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	90.7	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	86.6	70.0	130
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	84.8	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	90.6	70.0	130
EG005T: Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----
EG005T: Silver	7440-22-4	2	mg/kg	<2	2.9 mg/kg	73.2	70.0	130
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	83.6	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	72.4	70.0	130
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4337663)								
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	64.5	50.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	105	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	101	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	95.1	70.0	130
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	85.0	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	99.4	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	85.8	70.0	130
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	92.4	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	79.0	70.0	130
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4337731)								
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.2	----	----	----	----
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4337732)								
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.2	----	----	----	----
EA001: pH in soil using 0.01M CaCl extract (QCLot: 4338897)								
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	100	98.8	101
				----	7 pH Unit	100	99.3	101
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4337661)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	99.2	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4337662)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	90.6	70.0	130



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4336917)									
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	112	70.0	130	
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4336918)									
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	112	70.0	130	
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4337553)									
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	80.1	70.0	130	
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4337555)									
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	95.8	70.0	130	
EK040T: Fluoride Total (QCLot: 4336911)									
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	75.2	75.2	110	
EK040T: Fluoride Total (QCLot: 4336912)									
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	75.2	75.2	110	
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4335079)									
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	96.9	67.4	136	
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4335088)									
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	89.0	67.4	136	
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4334289)									
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	88.7	69.2	116	
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	84.8	67.7	116	
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	85.6	66.6	115	
EP074-UT: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	4.2 mg/kg	84.5	65.2	112	
	106-42-3								
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	87.2	69.4	111	
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	86.1	68.4	110	
EP074H: Naphthalene (QCLot: 4334289)									
EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	0.6 mg/kg	83.4	72.3	114	
EP074I: Volatile Halogenated Compounds (QCLot: 4334289)									
EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	113	47.0	138	
EP074-UT: 1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	84.6	57.6	125	
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	91.4	72.3	115	
EP074-UT: trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	87.6	60.5	122	
EP074-UT: cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	88.6	70.3	112	
EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	90.4	66.6	115	
EP074-UT: 1,1,1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	83.4	64.4	122	
EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	83.0	58.4	127	
EP074-UT: 1,2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	89.4	72.9	114	
EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	83.6	64.7	115	
EP074-UT: 1,1,2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	83.8	72.6	116	



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike	Spike Recovery (%)	Acceptable Limits (%)	
					Concentration	LCS	Low	High
EP074I: Volatile Halogenated Compounds (QCLot: 4334289) - continued								
EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	82.2	60.0	119
EP074-UT: 1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	85.4	71.8	116
EP074-UT: 1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	91.4	66.1	116
EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	78.2	39.8	128
EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	84.1	70.3	113
EP074-UT: 1.4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	80.8	62.6	113
EP074-UT: 1.2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	81.2	70.8	110
EP074-UT: 1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	77.2	48.4	120
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4335081)								
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	95.8	74.5	126
EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	97.3	72.7	126
EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	97.9	73.5	132
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	104	72.8	128
EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	2 mg/kg	93.2	73.3	134
EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	2 mg/kg	91.2	72.4	128
EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	91.3	69.4	126
EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/5 8-90-2	0.05	mg/kg	<0.05	4 mg/kg	92.1	71.9	128
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	98.0	54.4	135
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4335087)								
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	90.8	74.5	126
EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	89.3	72.7	126
EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	89.7	73.5	132
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	91.4	72.8	128
EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	2 mg/kg	90.0	73.3	134
EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	2 mg/kg	89.6	72.4	128
EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	87.8	69.4	126
EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/5 8-90-2	0.05	mg/kg	<0.05	4 mg/kg	87.4	71.9	128
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	84.7	54.4	135
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4335081)								
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	101	71.5	130
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	97.2	73.4	129
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	95.9	74.3	129
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	88.9	70.9	133
EP075-EM: 2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	99.4	71.8	132
EP075-EM: 2.4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	56.9	41.0	156
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	88.8	65.3	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	
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4335081) - continued									
EP075-EM: 2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	80.9	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	91.4	62.0	128	
EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	85.8	34.5	137	
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4335087)									
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	96.7	71.5	130	
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	110	73.4	129	
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	96.5	74.3	129	
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	86.6	70.9	133	
EP075-EM: 2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	88.2	71.8	132	
EP075-EM: 2.4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	65.5	41.0	156	
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	86.9	65.3	134	
EP075-EM: 2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	77.2	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	82.0	62.0	128	
EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	72.0	34.5	137	
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4335081)									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	96.7	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	97.1	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	95.7	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	101	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	103	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	102	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	99.3	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	99.9	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	99.2	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	100	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	104	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	103	65.1	130	
EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	107	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	107	72.9	135	
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	107	71.3	134	
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4335087)									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	88.0	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	89.2	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	89.9	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	94.1	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	91.0	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	91.1	78.4	127	



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	
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4335087) - continued									
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	87.5	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	91.8	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	92.2	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	92.5	75.0	133	
EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	4 mg/kg	93.7	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	93.4	65.1	130	
EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	89.9	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	90.1	72.9	135	
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	89.6	71.3	134	
EP075I: Organochlorine Pesticides (QCLot: 4335081)									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	101	71.0	129	
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	108	74.8	126	
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	106	75.7	130	
EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	2 mg/kg	103	70.8	130	
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	104	76.5	134	
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	105	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	105	76.8	130	
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	93.5	73.6	130	
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	96.4	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	97.3	75.3	131	
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	101	69.4	134	
EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	105	71.0	132	
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	101	78.0	133	
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	93.2	69.0	143	
EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	2 mg/kg	99.9	55.7	145	
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	98.9	71.4	135	
EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	98.6	74.8	134	
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	104	70.2	135	
EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	98.2	77.7	133	
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	100	63.6	135	
EP075I: Organochlorine Pesticides (QCLot: 4335087)									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	86.9	71.0	129	
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	86.5	74.8	126	
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	90.0	75.7	130	
EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	2 mg/kg	89.4	70.8	130	
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	89.0	76.5	134	
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	90.9	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	89.2	76.8	130	



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
EP075I: Organochlorine Pesticides (QCLot: 4335087) - continued									
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	90.0	73.6	130	
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	89.7	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	86.3	75.3	131	
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	85.8	69.4	134	
EP075-EM: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	89.1	71.0	132	
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	85.7	78.0	133	
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	90.0	69.0	143	
EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	2 mg/kg	72.1	55.7	145	
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	90.9	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	90.2	70.2	135	
EP075-EM: 4,4'-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	89.5	77.7	133	
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	91.4	63.6	135	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4334289)									
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	81.3	61.1	119	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4335080)									
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	670 mg/kg	103	74.4	129	
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	2860 mg/kg	106	81.0	123	
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1490 mg/kg	97.5	81.8	121	
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5020 mg/kg	103	70.0	130	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4335089)									
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	670 mg/kg	110	74.4	129	
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	2860 mg/kg	112	81.0	123	
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1490 mg/kg	101	81.8	121	
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5020 mg/kg	108	70.0	130	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4334289)									
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	86.9	59.9	119	
EP074-UT: C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	----	----	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4335080)									
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1000 mg/kg	101	75.4	132	
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	3770 mg/kg	108	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	250 mg/kg	106	73.3	136	
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5020 mg/kg	106	70.0	130	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4335089)									
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1000 mg/kg	116	75.4	132	
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	3770 mg/kg	110	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	250 mg/kg	114	73.3	136	



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	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4335089) - continued									
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5020 mg/kg	112	70.0	130	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4337822)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	91.4	72.0	128	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	93.9	73.0	123	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	67.9	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	98.1	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	90.1	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	89.5	59.0	134	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4339557)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	93.3	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	85.7	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	109	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	97.4	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	84.2	59.0	134	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4337822)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	92.2	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.0	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.0	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.0	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.0	69.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.1	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.1	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.6	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.6	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	99.1	69.0	133	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4339557)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	80.8	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	74.1	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.4	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.1	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.9	69.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	79.3	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.0	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.7	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.8	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	77.8	66.0	139	



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	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4339557) - continued									
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	86.9	69.0	133	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4337822)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.0	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	95.4	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	93.8	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	94.4	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	98.5	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	117	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.2	61.0	139	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4339557)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.9	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	105	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	90.5	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	88.8	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	87.0	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.0	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.5	61.0	139	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4337822)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	93.2	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	88.7	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	96.0	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	80.6	70.0	130	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4339557)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	85.8	62.0	145	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00119 mg/kg	96.2	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	93.0	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	79.0	70.0	130	
EP231P: PFAS Sums (QCLot: 4337822)									
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	----	----	----	----	



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
EP231P: PFAS Sums (QCLot: 4337822) - continued									
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----	
EP231P: PFAS Sums (QCLot: 4339557)									
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----	
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----	
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----	

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report				
					Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4335947)									
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	114	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	108	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	95.6	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	99.4	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	95.3	53.0	142	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4338811)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	92.9	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	118	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	117	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	126	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	101	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	106	53.0	142	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4339436)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	104	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	95.1	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	87.8	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	94.9	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	94.0	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	94.2	53.0	142	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4335947)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	96.7	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	110	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	87.1	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	106	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	104	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	105	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	85.8	71.0	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	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4335947) - continued									
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	102	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	105	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.6	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	104	71.0	132	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4338811)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	93.9	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	110	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	96.1	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	91.6	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	87.0	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	90.8	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	90.7	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	100	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	82.1	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	112	71.0	132	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4339436)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	86.9	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	80.1	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	99.7	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	103	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	75.4	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	96.7	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	91.0	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	80.4	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	96.8	71.0	132	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4335947)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	97.5	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	104	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	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	108	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	119	65.0	136	



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	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4335947) - continued									
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	112	61.0	135	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4338811)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	103	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	107	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	103	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	101	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	93.3	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	107	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	98.2	61.0	135	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4339436)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	97.6	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	104	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	112	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	97.6	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	115	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	106	61.0	135	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4335947)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	107	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	115	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	85.7	70.0	130	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4338811)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	91.2	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	112	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	120	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	93.5	70.0	130	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4339436)									
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	106	64.0	140	



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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4339436) - continued								
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	106	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	74.3	70.0	130
EP231P: PFAS Sums (QCLot: 4335947)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----
EP231P: PFAS Sums (QCLot: 4338811)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----
EP231P: PFAS Sums (QCLot: 4339436)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
				MS	Low	High	
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4337660)							
EM2208523-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	81.7	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	87.6	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	110	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	92.5	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	88.3	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	108	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	82.2	80.0	120
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4337663)							
EM2208544-014	SX_OB_20220511_04_09_SS_Primary_ALS	EG005T: Arsenic	7440-38-2	50 mg/kg	83.0	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	93.1	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	89.3	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	89.0	80.0	120



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
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4337663) - continued							
EM2208544-014	SX_OB_20220511_04_09_SS_Primary_ALS	EG005T: Lead	7439-92-1	250 mg/kg	93.6	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	106	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	82.3	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4337661)							
EM2208523-002	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	103	76.0	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4337662)							
EM2208544-014	SX_OB_20220511_04_09_SS_Primary_ALS	EG035T: Mercury	7439-97-6	0.5 mg/kg	108	76.0	116
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4336917)							
EM2208523-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	98.5	58.0	114
EM2208523-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	104	58.0	114
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4336918)							
EM2208544-014	SX_OB_20220511_04_09_SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	92.7	58.0	114
EM2208544-014	SX_OB_20220511_04_09_SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	105	58.0	114
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4337553)							
EM2208523-001	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	83.0	70.0	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4337555)							
EM2208544-013	SX_OB_20220511_00_09_SS_Primary_ALS	EK026SF: Total Cyanide	57-12-5	20 mg/kg	82.2	70.0	130
EK040T: Fluoride Total (QCLot: 4336911)							
EM2208523-002	Anonymous	EK040T: Fluoride	16984-48-8	400 mg/kg	70.4	70.0	130
EK040T: Fluoride Total (QCLot: 4336912)							
EM2208544-014	SX_OB_20220511_04_09_SS_Primary_ALS	EK040T: Fluoride	16984-48-8	400 mg/kg	70.0	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4335079)							
EM2208523-003	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	91.9	59.6	152
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4335088)							
EM2208397-001	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	# Not Determined	59.6	152
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4334289)							
EM2208544-002	SX_OB_20220510_07_50_SS_Duplicate_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	93.3	53.7	130
		EP074-UT: Toluene	108-88-3	2 mg/kg	88.6	55.1	124
EP074I: Volatile Halogenated Compounds (QCLot: 4334289)							
EM2208544-002	SX_OB_20220510_07_50_SS_Duplicate_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	105	38.4	145
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	84.1	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	81.0	55.5	122
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4335081)							



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
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4335081) - continued							
EM2208523-002	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	107	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	112	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	103	10.0	144
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4335087)							
EM2208405-001	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	102	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	108	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	68.5	10.0	144
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4335081)							
EM2208523-002	Anonymous	EP075-EM: Phenol	108-95-2	3 mg/kg	111	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	98.1	34.2	129
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4335087)							
EM2208405-001	Anonymous	EP075-EM: Phenol	108-95-2	3 mg/kg	106	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	92.6	34.2	129
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4335081)							
EM2208523-002	Anonymous	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	100	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	108	37.8	152
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4335087)							
EM2208405-001	Anonymous	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	85.3	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	103	37.8	152
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4334289)							
EM2208544-002	SX_OB_20220510_07_50_SS_Duplicate_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	75.0	42.3	111
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4335080)							
EM2208523-004	Anonymous	EP071-EM: C10 - C14 Fraction	----	670 mg/kg	104	71.3	126
		EP071-EM: C15 - C28 Fraction	----	2860 mg/kg	104	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1490 mg/kg	95.8	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	5020 mg/kg	101	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4335089)							
EM2208405-002	Anonymous	EP071-EM: C10 - C14 Fraction	----	670 mg/kg	108	71.3	126
		EP071-EM: C15 - C28 Fraction	----	2860 mg/kg	107	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1490 mg/kg	97.3	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	5020 mg/kg	104	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4334289)							
EM2208544-002	SX_OB_20220510_07_50_SS_Duplicate_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	71.1	39.9	109
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4335080)							
EM2208523-004	Anonymous	EP071-EM: >C10 - C16 Fraction	----	1000 mg/kg	101	71.5	130



Sub-Matrix: SOIL

				Matrix Spike (MS) Report					
				Spike	SpikeRecovery(%)	Acceptable Limits (%)			
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High		
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4335080) - continued									
EM2208523-004	Anonymous	EP071-EM: >C16 - C34 Fraction	----	3770 mg/kg	106	76.9	119		
		EP071-EM: >C34 - C40 Fraction	----	250 mg/kg	105	65.3	139		
		EP071-EM: >C10 - C40 Fraction (sum)	----	5020 mg/kg	105	70.0	130		
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4335089)									
EM2208405-002	Anonymous	EP071-EM: >C10 - C16 Fraction	----	1000 mg/kg	112	71.5	130		
		EP071-EM: >C16 - C34 Fraction	----	3770 mg/kg	106	76.9	119		
		EP071-EM: >C34 - C40 Fraction	----	250 mg/kg	116	65.3	139		
		EP071-EM: >C10 - C40 Fraction (sum)	----	5020 mg/kg	107	70.0	130		
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4337822)									
EM2208217-072	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	88.0	72.0	128		
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	90.0	73.0	123		
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	87.5	67.0	130		
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	91.4	70.0	132		
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	88.5	68.0	136		
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	86.2	59.0	134		
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4339557)									
EM2208352-014	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	# 32.0	72.0	128		
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	# 40.5	73.0	123		
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	# Not Determined	67.0	130		
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	# Not Determined	70.0	132		
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	# Not Determined	68.0	136		
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	# 35.3	59.0	134		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4337822)									
EM2208217-072	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	89.9	71.0	135		
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	90.5	69.0	132		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	82.8	70.0	132		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	94.3	71.0	131		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	96.9	69.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	95.2	72.0	129		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	89.8	69.0	133		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	86.0	64.0	136		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	103	69.0	135		
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	138	66.0	139		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	91.0	69.0	133		
		EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4339557)							



Sub-Matrix: SOIL

				Matrix Spike (MS) Report			
				Spike	Spike Recovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4339557) - continued							
EM2208352-014	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	# 56.1	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	70.8	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	# Not Determined	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	# Not Determined	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	# Not Determined	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	# Not Determined	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	# Not Determined	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	# Not Determined	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	86.9	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	# 64.7	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	# 65.8	69.0	133		
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4337822)							
EM2208217-072	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	92.7	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	106	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	90.3	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	87.7	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	86.7	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	108	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	95.6	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4339557)							
EM2208352-014	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	# Not Determined	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	70.7	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	# 61.5	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	# 67.2	70.0	130



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
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4339557) - continued							
EM2208352-014	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	# 44.9	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	# Not Determined	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	# Not Determined	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4337822)							
EM2208217-072	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	91.2	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	93.3	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	106	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	# 37.4	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4339557)							
EM2208352-014	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	63.5	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	# 60.7	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	# 59.9	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	# 41.9	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
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4335947)							
EM2208385-003	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	91.5	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	83.8	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	86.2	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	100	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	93.8	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	81.9	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4338811)							
EM2208544-024	SX_OB_20220511_00_02_SS_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	90.5	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	117	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	122	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	132	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	98.2	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	96.4	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4339436)							
EM2208544-014	SX_OB_20220511_04_09_SS_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	102	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	98.5	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	94.1	68.0	131



Sub-Matrix: WATER

				Matrix Spike (MS) Report					
				Spike	SpikeRecovery(%)	Acceptable Limits (%)			
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High		
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4339436) - continued									
EM2208544-014	SX_OB_20220511_04_09_SS_Primary_ALS	EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	103	69.0	134		
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	95.7	65.0	140		
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	100	53.0	142		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4335947)									
EM2208385-003	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	88.3	73.0	129		
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	99.1	72.0	129		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	88.1	72.0	129		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	95.0	72.0	130		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	89.8	71.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	104	69.0	130		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	84.7	71.0	129		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	91.6	69.0	133		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	91.5	72.0	134		
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	91.4	65.0	144		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	93.9	71.0	132		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4338811)									
EM2208544-024	SX_OB_20220511_00_02_SS_Primary_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	94.5	73.0	129		
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	104	72.0	129		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	111	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	91.7	71.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	96.4	69.0	130		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	94.4	71.0	129		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	86.3	69.0	133		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	116	72.0	134		
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	89.0	65.0	144		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	111	71.0	132		
		EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4339436)							
		EM2208544-014	SX_OB_20220511_04_09_SS_Primary_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	87.0	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3			0.25 µg/L	107	72.0	129		
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4			0.25 µg/L	78.2	72.0	129		
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9			0.25 µg/L	102	72.0	130		
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1			0.25 µg/L	96.5	71.0	133		
EP231X: Perfluorononanoic acid (PFNA)	375-95-1			0.25 µg/L	110	69.0	130		
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2			0.25 µg/L	74.2	71.0	129		
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8			0.25 µg/L	92.4	69.0	133		
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1			0.25 µg/L	85.0	72.0	134		
EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8			0.25 µg/L	77.3	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
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4339436) - continued							
EM2208544-014	SX_OB_20220511_04_09_SS_Primary_ALS	EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	100	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4335947)							
EM2208385-003	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	95.2	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	94.6	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	93.1	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	84.3	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	88.6	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	98.0	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	94.0	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4338811)							
EM2208544-024	SX_OB_20220511_00_02_SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	101	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	114	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	100	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	93.3	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	92.4	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	108	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	80.5	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4339436)							
EM2208544-014	SX_OB_20220511_04_09_SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	102	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	97.0	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	108	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	94.4	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	98.2	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	120	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
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4339436) - continued							
EM2208544-014	SX_OB_20220511_04_09_SS_Primary_ALS	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	104	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4335947)							
EM2208385-003	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	92.4	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	97.6	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	104	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	72.2	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4338811)							
EM2208544-024	SX_OB_20220511_00_02_SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	95.8	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	105	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	112	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	82.2	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4339436)							
EM2208544-014	SX_OB_20220511_04_09_SS_Primary_ALS	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	96.4	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	103	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	70.3	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EM2208544	Page	: 1 of 18
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: Craig Trimbur	Telephone	: +61-3-8549 9600
Project	: JC0927	Date Samples Received	: 11-May-2022
Site	: 20220511043348-ALS-52	Issue Date	: 17-May-2022
Sampler	: HK - EP Risk Martha - Agon	No. of samples received	: 26
Order number	: ----	No. of samples analysed	: 26

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP066: Polychlorinated Biphenyls (PCB)	EM2208397--001	Anonymous	Total Polychlorinated biphenyls	----	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231A: Perfluoroalkyl Sulfonic Acids	EM2208352--014	Anonymous	Perfluorobutane sulfonic acid (PFBS)	375-73-5	32.0 %	72.0-128%	Recovery less than lower data quality objective
EP231A: Perfluoroalkyl Sulfonic Acids	EM2208352--014	Anonymous	Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	40.5 %	73.0-123%	Recovery less than lower data quality objective
EP231A: Perfluoroalkyl Sulfonic Acids	EM2208352--014	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	EM2208352--014	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	EM2208352--014	Anonymous	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231A: Perfluoroalkyl Sulfonic Acids	EM2208352--014	Anonymous	Perfluorodecane sulfonic acid (PFDS)	335-77-3	35.3 %	59.0-134%	Recovery less than lower data quality objective
EP231B: Perfluoroalkyl Carboxylic Acids	EM2208352--014	Anonymous	Perfluorobutanoic acid (PFBA)	375-22-4	56.1 %	71.0-135%	Recovery less than lower data quality objective
EP231B: Perfluoroalkyl Carboxylic Acids	EM2208352--014	Anonymous	Perfluorohexanoic acid (PFHxA)	307-24-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	EM2208352--014	Anonymous	Perfluoroheptanoic acid (PFHpA)	375-85-9	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	EM2208352--014	Anonymous	Perfluorooctanoic acid (PFOA)	335-67-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	EM2208352--014	Anonymous	Perfluorononanoic acid (PFNA)	375-95-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	EM2208352--014	Anonymous	Perfluorodecanoic acid (PFDA)	335-76-2	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	EM2208352--014	Anonymous	Perfluoroundecanoic acid (PFUnDA)	2058-94-8	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.



Matrix: SOIL

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries - Continued							
EP231B: Perfluoroalkyl Carboxylic Acids	EM2208352--014	Anonymous	Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	64.7 %	66.0-139%	Recovery less than lower data quality objective
EP231B: Perfluoroalkyl Carboxylic Acids	EM2208352--014	Anonymous	Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	65.8 %	69.0-133%	Recovery less than lower data quality objective
EP231C: Perfluoroalkyl Sulfonamides	EM2208352--014	Anonymous	Perfluorooctane sulfonamide (FOSA)	754-91-6	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231C: Perfluoroalkyl Sulfonamides	EM2208352--014	Anonymous	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	61.5 %	70.0-130%	Recovery less than lower data quality objective
EP231C: Perfluoroalkyl Sulfonamides	EM2208352--014	Anonymous	N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	67.2 %	70.0-130%	Recovery less than lower data quality objective
EP231C: Perfluoroalkyl Sulfonamides	EM2208352--014	Anonymous	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	44.9 %	70.0-130%	Recovery less than lower data quality objective
EP231C: Perfluoroalkyl Sulfonamides	EM2208352--014	Anonymous	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231C: Perfluoroalkyl Sulfonamides	EM2208352--014	Anonymous	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2208352--014	Anonymous	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	60.7 %	64.0-140%	Recovery less than lower data quality objective
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2208352--014	Anonymous	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	59.9 %	65.0-137%	Recovery less than lower data quality objective
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2208217--072	Anonymous	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	37.4 %	70.0-130%	Recovery less than lower data quality objective
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2208352--014	Anonymous	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	41.9 %	70.0-130%	Recovery less than lower data quality objective



Analysis Holding Time Compliance

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

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

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

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

Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA001: pH in soil using 0.01M CaCl extract								
Soil Glass Jar - Unpreserved (EA001)								
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	16-May-2022	17-May-2022	✓	16-May-2022	16-May-2022	✓
Soil Glass Jar - Unpreserved (EA001)								
SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	16-May-2022	18-May-2022	✓	16-May-2022	16-May-2022	✓
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055)								
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	----	----	----	13-May-2022	24-May-2022	✓
Soil Glass Jar - Unpreserved (EA055)								
SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	----	----	----	13-May-2022	25-May-2022	✓
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	16-May-2022	06-Nov-2022	✓	16-May-2022	06-Nov-2022	✓
Soil Glass Jar - Unpreserved (EG005T)								
SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	16-May-2022	07-Nov-2022	✓	16-May-2022	07-Nov-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	
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T) SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	16-May-2022	07-Jun-2022	✓	17-May-2022	07-Jun-2022	✓
Soil Glass Jar - Unpreserved (EG035T) SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	16-May-2022	08-Jun-2022	✓	17-May-2022	08-Jun-2022	✓
EG048: Hexavalent Chromium (Alkaline Digest)								
Soil Glass Jar - Unpreserved (EG048G) SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	14-May-2022	07-Jun-2022	✓	16-May-2022	21-May-2022	✓
Soil Glass Jar - Unpreserved (EG048G) SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	14-May-2022	08-Jun-2022	✓	16-May-2022	21-May-2022	✓
EK026SF: Total CN by Segmented Flow Analyser								
Soil Glass Jar - Unpreserved (EK026SF) SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	13-May-2022	24-May-2022	✓	14-May-2022	27-May-2022	✓
Soil Glass Jar - Unpreserved (EK026SF) SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	13-May-2022	25-May-2022	✓	14-May-2022	27-May-2022	✓
EK040T: Fluoride Total								
Soil Glass Jar - Unpreserved (EK040T) SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	13-May-2022	07-Jun-2022	✓	17-May-2022	07-Jun-2022	✓
Soil Glass Jar - Unpreserved (EK040T) SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	13-May-2022	08-Jun-2022	✓	17-May-2022	08-Jun-2022	✓



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P)								
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	13-May-2022	06-Nov-2022	✓	----	----	----
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P)								
SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	13-May-2022	07-Nov-2022	✓	----	----	----
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P)								
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	13-May-2022	06-Nov-2022	✓	----	----	----
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P)								
SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	13-May-2022	07-Nov-2022	✓	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066-EM)								
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	13-May-2022	24-May-2022	✓	13-May-2022	22-Jun-2022	✓
Soil Glass Jar - Unpreserved (EP066-EM)								
SX_OB_20220511_00_02_SS_Primary_ALS		11-May-2022	13-May-2022	25-May-2022	✓	13-May-2022	22-Jun-2022	✓
Soil Glass Jar - Unpreserved (EP066-EM)								
SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220511_04_09_SS_Primary_ALS	11-May-2022	14-May-2022	25-May-2022	✓	16-May-2022	23-Jun-2022	✓
EP074A: Monocyclic Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	12-May-2022	17-May-2022	✓	12-May-2022	17-May-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	12-May-2022	18-May-2022	✓	12-May-2022	18-May-2022	✓



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis				
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation		
EP074H: Naphthalene									
Soil Glass Jar - Unpreserved (EP074-UT) SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	12-May-2022	17-May-2022	✓	12-May-2022	17-May-2022	✓	
Soil Glass Jar - Unpreserved (EP074-UT) SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	12-May-2022	18-May-2022	✓	12-May-2022	18-May-2022	✓	
EP074I: Volatile Halogenated Compounds									
Soil Glass Jar - Unpreserved (EP074-UT) SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	12-May-2022	17-May-2022	✓	12-May-2022	17-May-2022	✓	
Soil Glass Jar - Unpreserved (EP074-UT) SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	12-May-2022	18-May-2022	✓	12-May-2022	18-May-2022	✓	
EP075A: Phenolic Compounds (Halogenated)									
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	13-May-2022	24-May-2022	✓	13-May-2022	22-Jun-2022	✓	
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220511_00_02_SS_Primary_ALS		11-May-2022	13-May-2022	25-May-2022	✓	13-May-2022	22-Jun-2022	✓	
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220511_04_09_SS_Primary_ALS	11-May-2022	14-May-2022	25-May-2022	✓	16-May-2022	23-Jun-2022	✓	
EP075A: Phenolic Compounds (Non-halogenated)									
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	13-May-2022	24-May-2022	✓	13-May-2022	22-Jun-2022	✓	
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220511_00_02_SS_Primary_ALS		11-May-2022	13-May-2022	25-May-2022	✓	13-May-2022	22-Jun-2022	✓	
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220511_04_09_SS_Primary_ALS	11-May-2022	14-May-2022	25-May-2022	✓	16-May-2022	23-Jun-2022	✓	



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis				
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation		
EP075B: Polynuclear Aromatic Hydrocarbons									
Soil Glass Jar - Unpreserved (EP075-EM)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	13-May-2022	24-May-2022	✓	13-May-2022	22-Jun-2022	✓	
Soil Glass Jar - Unpreserved (EP075-EM)									
SX_OB_20220511_00_02_SS_Primary_ALS		11-May-2022	13-May-2022	25-May-2022	✓	13-May-2022	22-Jun-2022	✓	
Soil Glass Jar - Unpreserved (EP075-EM)									
SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220511_04_09_SS_Primary_ALS	11-May-2022	14-May-2022	25-May-2022	✓	16-May-2022	23-Jun-2022	✓	
EP075I: Organochlorine Pesticides									
Soil Glass Jar - Unpreserved (EP075-EM)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	13-May-2022	24-May-2022	✓	13-May-2022	22-Jun-2022	✓	
Soil Glass Jar - Unpreserved (EP075-EM)									
SX_OB_20220511_00_02_SS_Primary_ALS		11-May-2022	13-May-2022	25-May-2022	✓	13-May-2022	22-Jun-2022	✓	
Soil Glass Jar - Unpreserved (EP075-EM)									
SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220511_04_09_SS_Primary_ALS	11-May-2022	14-May-2022	25-May-2022	✓	16-May-2022	23-Jun-2022	✓	
EP080/071: Total Petroleum Hydrocarbons									
Soil Glass Jar - Unpreserved (EP074-UT)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	12-May-2022	17-May-2022	✓	12-May-2022	17-May-2022	✓	
Soil Glass Jar - Unpreserved (EP071-EM)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	13-May-2022	24-May-2022	✓	13-May-2022	22-Jun-2022	✓	
Soil Glass Jar - Unpreserved (EP074-UT)									
SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	12-May-2022	18-May-2022	✓	12-May-2022	18-May-2022	✓	
Soil Glass Jar - Unpreserved (EP071-EM)									
SX_OB_20220511_00_02_SS_Primary_ALS		11-May-2022	13-May-2022	25-May-2022	✓	13-May-2022	22-Jun-2022	✓	
Soil Glass Jar - Unpreserved (EP071-EM)									
SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220511_04_09_SS_Primary_ALS	11-May-2022	14-May-2022	25-May-2022	✓	16-May-2022	23-Jun-2022	✓	



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	12-May-2022	17-May-2022	✓	12-May-2022	17-May-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM)								
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	13-May-2022	24-May-2022	✓	13-May-2022	22-Jun-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	12-May-2022	18-May-2022	✓	12-May-2022	18-May-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM)								
SX_OB_20220511_00_02_SS_Primary_ALS		11-May-2022	13-May-2022	25-May-2022	✓	13-May-2022	22-Jun-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM)								
SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220511_04_09_SS_Primary_ALS	11-May-2022	14-May-2022	25-May-2022	✓	16-May-2022	23-Jun-2022	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X)								
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	16-May-2022	06-Nov-2022	✓	16-May-2022	25-Jun-2022	✓
HDPE Soil Jar (EP231X)								
SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	13-May-2022	07-Nov-2022	✓	13-May-2022	22-Jun-2022	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X)								
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	16-May-2022	06-Nov-2022	✓	16-May-2022	25-Jun-2022	✓
HDPE Soil Jar (EP231X)								
SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	13-May-2022	07-Nov-2022	✓	13-May-2022	22-Jun-2022	✓



Matrix: **SOIL**

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis				
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation		
EP231C: Perfluoroalkyl Sulfonamides									
HDPE Soil Jar (EP231X)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	16-May-2022	06-Nov-2022	✓	16-May-2022	25-Jun-2022	✓	
HDPE Soil Jar (EP231X)									
SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	13-May-2022	07-Nov-2022	✓	13-May-2022	22-Jun-2022	✓	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
HDPE Soil Jar (EP231X)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	16-May-2022	06-Nov-2022	✓	16-May-2022	25-Jun-2022	✓	
HDPE Soil Jar (EP231X)									
SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	13-May-2022	07-Nov-2022	✓	13-May-2022	22-Jun-2022	✓	
EP231P: PFAS Sums									
HDPE Soil Jar (EP231X)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS,	10-May-2022	16-May-2022	06-Nov-2022	✓	16-May-2022	25-Jun-2022	✓	
HDPE Soil Jar (EP231X)									
SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	SX_OB_20220511_00_09_SS_Primary_ALS,	11-May-2022	13-May-2022	07-Nov-2022	✓	13-May-2022	22-Jun-2022	✓	

Matrix: **WATER**

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

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



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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis				
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation		
EP231A: Perfluoroalkyl Sulfonic Acids									
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_09_04_SR_Rinsate_ALS,	SX_OB_20220510_09_10_SB_Blank_ALS	10-May-2022	13-May-2022	06-Nov-2022	✓	13-May-2022	06-Nov-2022	✓	
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS, SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS, SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	13-May-2022	14-May-2022	09-Nov-2022	✓	14-May-2022	09-Nov-2022	✓	
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS, SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS, SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	13-May-2022	16-May-2022	09-Nov-2022	✓	16-May-2022	09-Nov-2022	✓	
EP231B: Perfluoroalkyl Carboxylic Acids									
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_09_04_SR_Rinsate_ALS,	SX_OB_20220510_09_10_SB_Blank_ALS	10-May-2022	13-May-2022	06-Nov-2022	✓	13-May-2022	06-Nov-2022	✓	
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS, SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS, SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	13-May-2022	14-May-2022	09-Nov-2022	✓	14-May-2022	09-Nov-2022	✓	
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS, SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS, SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	13-May-2022	16-May-2022	09-Nov-2022	✓	16-May-2022	09-Nov-2022	✓	



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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis				
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation		
EP231C: Perfluoroalkyl Sulfonamides									
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_09_04_SR_Rinsate_ALS,	SX_OB_20220510_09_10_SB_Blank_ALS	10-May-2022	13-May-2022	06-Nov-2022	✓	13-May-2022	06-Nov-2022	✓	
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS, SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS, SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	13-May-2022	14-May-2022	09-Nov-2022	✓	14-May-2022	09-Nov-2022	✓	
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS, SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS, SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	13-May-2022	16-May-2022	09-Nov-2022	✓	16-May-2022	09-Nov-2022	✓	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_09_04_SR_Rinsate_ALS,	SX_OB_20220510_09_10_SB_Blank_ALS	10-May-2022	13-May-2022	06-Nov-2022	✓	13-May-2022	06-Nov-2022	✓	
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS, SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS, SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	13-May-2022	14-May-2022	09-Nov-2022	✓	14-May-2022	09-Nov-2022	✓	
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS, SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS, SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	13-May-2022	16-May-2022	09-Nov-2022	✓	16-May-2022	09-Nov-2022	✓	



Matrix: WATER

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis				
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation		
EP231P: PFAS Sums									
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_09_04_SR_Rinsate_ALS, SX_OB_20220510_09_10_SB_Blank_ALS	10-May-2022	13-May-2022	06-Nov-2022	✓	13-May-2022	06-Nov-2022	✓		
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS, SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS, SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	13-May-2022	14-May-2022	09-Nov-2022	✓	14-May-2022	09-Nov-2022	✓	
HDPE (no PTFE) (EP231X)									
SX_OB_20220510_07_49_SS_Primary_ALS, SX_IB_20220510_08_00_SS_Primary_ALS, SX_OB_20220510_15_47_SS_Triplicate_ALS, SX_OB_20220510_15_55_SS_Primary_ALS, SX_OB_20220510_20_10_SS_Primary_ALS, SX_OB_20220511_00_09_SS_Primary_ALS,	SX_OB_20220510_07_50_SS_Duplicate_ALS, SX_OB_20220510_11_54_SS_Primary_ALS, SX_IB_20220510_15_51_SS_Primary_ALS, SX_OB_20220510_20_08_SS_Triplicate_ALS, SX_OB_20220511_00_02_SS_Primary_ALS, SX_OB_20220511_04_09_SS_Primary_ALS	13-May-2022	16-May-2022	09-Nov-2022	✓	16-May-2022	09-Nov-2022	✓	



Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Reaular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	3	22	13.64	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	3	22	13.64	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	4	32	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	35	11.43	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	4	39	10.26	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	4	33	12.12	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	3	22	13.64	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	3	22	13.64	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	22	13.64	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	4	32	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	4	22	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	32	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	35	5.71	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	2	39	5.13	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	33	6.06	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	2	32	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Deionised Water Leach - Plastic Leaching Vessel	EN60-DIa-P	2	24	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	32	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	35	5.71	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	2	39	5.13	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	33	6.06	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	2	32	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard



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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Reular	Actual	Expected	Evaluation	
Analytical Methods							
Matrix Spikes (MS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	4	22	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	32	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	35	5.71	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	2	39	5.13	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	33	6.06	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	2	32	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard

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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Reular	Actual	Expected	Evaluation	
Analytical Methods							
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	6	42	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	42	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	42	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	42	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

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

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



Analytical Methods	Method	Matrix	Method Descriptions
Volatile Organic Compounds - Ultra-trace - Summations	EP074-UT-SUM	SOIL	Summation of MAHs and VHCs
Semivolatile Organic Compounds - Waste Classification	EP075-EM	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
SVOC - Waste Classification (Sums)	EP075-EM-SUM	SOIL	Summations for EP075 (EM variation)
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	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 ₂ extract	EA001-PR	SOIL	In house: Referenced to Rayment and Lyons 4B1, 10 g of soil is mixed with 50 mL of 0.01M CaCl ₂ and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM Schedule B(3).
Alkaline digestion for Hexavalent Chromium	EG048PR	SOIL	In house: Referenced to USEPA SW846, Method 3060A.
Total Fluoride	EK040T-PR	SOIL	In house: Samples are fused with Sodium Carbonate / Potassium Carbonate flux.
ASLP for Non & Semivolatile Analytes - Plastic Leaching Vessel	EN60a-P	SOIL	In house QWI-EN/60 referenced to AS4439.3 Preparation of Leachates.
Deionised Water Leach - Plastic Leaching Vessel	EN60-DIa-P	SOIL	In house QWI-EN/60 referenced to AS4439.3 Preparation of Leachates
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils - Ultra-trace.	ORG16-UT	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids - VIC EPA Screen	ORG17-EM	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na ₂ SO ₄ and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.



<i>Preparation Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	SOIL	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.
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.