

TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	D07.0220220531104240_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	2	Source Geological Domain	3
Approx. Source Tunnel Chainage From	290	Approx. Source Tunnel Chainage To	290
Approx. Rings From	124	Approx. Rings To	124
Foaming Agent	TamSoil 287AC	Water Source	Potable (City West Water)
For BSF Holding Bay No:	D07.02	Start of Filling From (Time / date)	18/05/2022
Tonnes Put in Holding Bay No:	5861.10	Finish of Filling (Time / Date)	19/05/2022
Classified Volume (LCM)	3663.19	Spoil Classification Decision	NPIW Containment
Sampling Ratio (samples per LCM)	1: 244.21	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_IB_20220518_11_51_SS_Primary_ALS	SX_IB_20220518_15_54_SS_Primary_ALS	SX_IB_20220519_07_51_SS_Primary_ALS
SX_IB_20220518_12_40_SS_Primary_EUF	SX_IB_20220518_23_55_SS_Primary_ALS	SX_IB_20220519_08_09_SS_Primary_EUF
SX_IB_20220518_15_46_SS_Primary_EUF	SX_IB_20220519_00_05_SS_Primary_EUF	SX_IB_20220605_11_16_SS_Primary_ALS
SX_IB_20220518_15_50_SS_Duplicate_EUF	SX_IB_20220519_04_05_SS_Primary_EUF	SX_IB_20220605_11_18_SS_Duplicate_ALS
SX_IB_20220518_15_51_SS_Triplicate_ALS	SX_IB_20220519_04_11_SS_Primary_ALS	SX_IB_20220605_11_19_SS_Triplicate_EUF
Total Sample Numbers	15	Ratio Acceptable
Primary Sample Numbers	11	Yes
Classified Volume (LCM)	3663.19 m ³	
Volume: Sample Number Ratio (Samples per LCM)	1: 244.21	

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3.2 Data Quality Compliance with SAQP

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

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

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

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3.3 Selection of the Spoil Sample Testing Regime

Table 3.3 - 1 Selection of the Spoil Sample Testing Regime

	(State Yes or No in each Row)
<p>A. Is testing all spoil samples taken required for spoil in this Holding Bay, because prior to this Holding Bay, less than 10 Holding Bays of spoil have been tested from this Domain</p> <p>If the answer is Yes, go to E. If the answer is No, go to B.</p>	Yes
<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>If the answer is Yes, go to C. If the answer is No, go to D.</p>	NA
<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>	NA
<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
<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?	Yes
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?	No
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	15*	11	1 : 244.21	15	14	27.8	31.69	43	20	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Chromium (Hexavalent)	mg/kg	1	15*	11	1 : 244.21	6	<1.0	1.33	N/A	2.2	1	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Nickel	mg/kg	5	15*	11	1 : 244.21	15	144	194.5	209.6	260	60	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)

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

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

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

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

PFAS Test Results											
Chemical	Unit	LOR	No. of Samples	No. of primary samples	No > LOR	Min	Mean	95% UCL on Mean	Max	Upper Limiting Criteria for NPIW Containment	Spoil Category for PFAS
Total PFAS Concentrations											
Total PFOS	ug/kg	5	15*	11	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFOA	ug/kg	5	15*	11	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFHxS	ug/kg	5	15*	11	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
ASLP (pH= 5) PFAS Concentrations											
PFOA	ug/L	0.01	15*	11	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS+PFHxS	ug/L	0.01	15*	11	0	N/A	N/A	N/A	<0.01	7	NPIW-Containment
ASLP (pH= 7) PFAS Concentrations											
PFOA	ug/L	0.01	15*	11	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS+PFHxS	ug/L	0.01	15*	11	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.	Test result outcomes can lead to two classification possibilities; however, the classification decision follows the preference of the waste management hierarchy.
3.	Spoil is not from a “Zone of Exception”. Zone of exception applies a sampling ratio of only Primary Samples to LCM to categorise spoil as per the SAQP revision 5. Sample to categorised volume ratio in zones of exception is to be as per IWRG702 with 1 primary spoil sample categorising a maximum 250 m3 of spoil.

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4.	Loose Cubic metres (LCM) to mass (tonnes) conversion ratio used is 1 LCM:1.6 tonnes
5.	This report has been prepared in accordance with industry recognised standards and procedures current at the time of the work. The report presents the results of the assessment based on the quoted scope of works (unless otherwise agreed in writing) for the specific purposes of the engagement by the Client. No warranties expressed or implied, are offered to any third parties and no liability will be accepted for use of this report by third parties.
6.	All information provided by third parties has been assumed to be correct and complete. Agon does not assume any liability for misrepresentation of information by third parties or for matters not visible, accessible or present on the subject site.
7.	Opinions and judgements expressed herein are based on Agon's understanding of current regulatory standards and should not be construed as legal opinions. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties other than those listed above.
8.	This report should be read in full.

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5. Attachments

ATTACHMENT A: TABULATED RESULTS

ATTACHMENT B: 95% UCL AVE CALCULATIONS

ATTACHMENT C: LABORATORY CERTIFICATES

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ATTACHMENT A: TABULATED RESULTS

	Metals											
	Arsenic	Cadmium	Copper	Chromium (III-VI)	Chromium (hexavalent)	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin
	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
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold												
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold												
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold												
EPA PFAS Classification - Tunnel Zone - No option for disposal threshold												
EPA Victoria IWRG621 Category B Leached Upper Limits												
EPA Victoria IWRG621 Category B Upper Limits	2,000	400	20,000		2,000	6,000	300	4,000	12,000	200	720	
EPA Victoria IWRG621 Category C Leached Upper Limits												
EPA Victoria IWRG621 Category C Upper Limits	500	100	5,000		500	1,500	75	1,000	3,000	50	180	500
EPA Victoria IWRG621 Fill Upper Limits	20	3	100		1	300	1	40	60	10	10	50

Location Code	Field ID	Sample Code	Date	Lab Report Number	Lab Name	Sample Type	Parent Sample	Arsenic	Cadmium	Copper	Chromium (III-VI)	Chromium (hexavalent)	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	
D07.02	SX_IB_20220518_11_51_SS_Primary_ALS	EM2209314006	18/05/2022	EM2209314	ALSE-Melbourne	Normal		27	<1	56	102	<1.0	<5	<0.1	<5	170	<5	<2	<10	
D07.02	SX_IB_20220518_11_51_SS_Primary_ALS	EM2209314015	18/05/2022	EM2209314	ALSE-Melbourne	Normal														
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF	M22-My0045134	18/05/2022	889872	MGT	Normal		36	<0.4	63	130	<1	<5	<0.1	<5	210	<2	<2	<10	
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF	M22-My0045144	18/05/2022	889872	MGT	Normal														
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF	M22-My0045154	18/05/2022	889872	MGT	Normal														
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF	M22-My0045135	18/05/2022	889872	MGT	Normal		34	<0.4	67	140	<1	<5	<0.1	<5	220	<2	<2	<10	
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF	M22-My0045145	18/05/2022	889872	MGT	Normal														
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF	M22-My0045155	18/05/2022	889872	MGT	Normal														
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF	M22-My0045136	18/05/2022	889872	MGT	Field_D	M22-My0045135	43	<0.4	74	140	<1	<5	<0.1	<5	220	<2	<2	<10	
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF	M22-My0045146	18/05/2022	889872	MGT	Field_D	M22-My0045145													
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF	M22-My0045156	18/05/2022	889872	MGT	Field_D	M22-My0045155													
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS	EM2209314007	18/05/2022	EM2209314	ALSE-Melbourne	Interlab_D	M22-My0045135	29	<1	52	101	1.2	<5	<0.1	<5	157	<5	<2	<10	
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS	EM2209314016	18/05/2022	EM2209314	ALSE-Melbourne	Interlab_D	M22-My0045155													
D07.02	SX_IB_20220518_15_54_SS_Primary_ALS	EM2209314008	18/05/2022	EM2209314	ALSE-Melbourne	Normal		33	<1	56	116	1.1	<5	<0.1	<5	182	<5	<2	<10	
D07.02	SX_IB_20220518_15_54_SS_Primary_ALS	EM2209314017	18/05/2022	EM2209314	ALSE-Melbourne	Normal														
D07.02	SX_IB_20220518_23_55_SS_Primary_ALS	EM2209314010	18/05/2022	EM2209314	ALSE-Melbourne	Normal		14	<1	50	94	<1.0	<5	<0.1	<5	144	<5	<2	<10	
D07.02	SX_IB_20220518_23_55_SS_Primary_ALS	EM2209314019	18/05/2022	EM2209314	ALSE-Melbourne	Normal														
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF	M22-My0045138	9/05/2022	889872	MGT	Normal		43	<0.4	100	170	<1	<5	<0.1	<5	260	<2	<2	<10	
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF	M22-My0045148	9/05/2022	889872	MGT	Normal														
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF	M22-My0045158	9/05/2022	889872	MGT	Normal														
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF	M22-My0045139	19/05/2022	889872	MGT	Normal		22	<0.4	62	130	<1	<5	<0.1	<5	210	<2	<2	<10	
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF	M22-My0045149	19/05/2022	889872	MGT	Normal														
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF	M22-My0045159	19/05/2022	889872	MGT	Normal														
D07.02	SX_IB_20220519_04_11_SS_Primary_ALS	EM2209314011	19/05/2022	EM2209314	ALSE-Melbourne	Normal		18	<1	65	124	1.1	<5	<0.1	<5	187	<5	<2	<10	
D07.02	SX_IB_20220519_04_11_SS_Primary_ALS	EM2209314020	19/05/2022	EM2209314	ALSE-Melbourne	Normal														
D07.02	SX_IB_20220519_07_51_SS_Primary_ALS	EM2209335001	19/05/2022	EM2209335	ALSE-Melbourne	Normal		22	<1	86	137	2.2	<5	<0.1	<5	186	<5	<2	<10	
D07.02	SX_IB_20220519_07_51_SS_Primary_ALS	EM2209335014	19/05/2022	EM2209335	ALSE-Melbourne	Normal														
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF	M22-My0048418	19/05/2022	890217	Eurofins Environment ANZ	Normal		22	<1	82	180	<1	<5	<0.1	<5	250	<5	<2	<10	
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF	M22-My0048434	19/05/2022	890217	Eurofins Environment ANZ	Normal														
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF	M22-My0048446	19/05/2022	890217	Eurofins Environment ANZ	Normal														
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	EM2210646003	5/06/2022	EM2210646	ALSE-Melbourne	Normal		27	<1	58	114	1.3	<5	<0.1	<5	178	<5	<2	<10	
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	EM2210646008	5/06/2022	EM2210646	ALSE-Melbourne	Normal														
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS	EM2210646004	5/06/2022	EM2210646	ALSE-Melbourne	Field_D	EM2210646003	23	<1	56	114	1.1	<5	<0.1	<5	163	<5	<2	<10	
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS	EM2210646009	5/06/2022	EM2210646	ALSE-Melbourne	Field_D	EM2210646008													
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF	M22-Jn0010517	5/06/2022	894855	Eurofins Environment ANZ	Interlab_D	EM2210646003	24	<1	61	130	<1	<5	<0.1	<5	180	<5	<2	<10	
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF	M22-Jn0010521	5/06/2022	894855	Eurofins Environment ANZ	Interlab_D	EM2210646003													
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF	M22-Jn0010525	5/06/2022	894855	Eurofins Environment ANZ	Interlab_D	EM2210646008													

	Zinc	PAH																						
		PAHs (Vic EPA List)	Benzo(b,h)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ (LOH)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	Benzene
EQL	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Th	5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Th																								
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Th																								
EPA PFAS Classification - Tunnel Zone - No option for disposal thre																								
EPA Victoria IWRG621 Category B Leached Upper Limits																								
EPA Victoria IWRG621 Category B Upper Limits	140,000	400								20													400	16
EPA Victoria IWRG621 Category C Leached Upper Limits																								
EPA Victoria IWRG621 Category C Upper Limits	35,000	100								5													100	4
EPA Victoria IWRG621 Fill Upper Limits	200	20								1													20	1

Location Code	Field ID	Zinc	PAHs (Vic EPA List)	Benzo(b,h)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ (LOH)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	Benzene
D07.02	SX_IB_20220518_11_51_SS_Primary_ALS	90	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
D07.02	SX_IB_20220518_11_51_SS_Primary_ALS																								
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF	110			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF																								
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF																								
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF	120			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																								
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF	130			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF																								
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF																								
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS	83	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS																								
D07.02	SX_IB_20220518_15_54_SS_Primary_ALS	89	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
D07.02	SX_IB_20220518_15_54_SS_Primary_ALS																								
D07.02	SX_IB_20220518_23_55_SS_Primary_ALS	71	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
D07.02	SX_IB_20220518_23_55_SS_Primary_ALS																								
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF	160			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF																								
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF																								
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF	110			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF																								
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF																								
D07.02	SX_IB_20220519_04_11_SS_Primary_ALS	92	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
D07.02	SX_IB_20220519_04_11_SS_Primary_ALS																								
D07.02	SX_IB_20220519_07_51_SS_Primary_ALS	106	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
D07.02	SX_IB_20220519_07_51_SS_Primary_ALS																								
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF	140			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF																								
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF																								
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	87	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS																								
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS	77	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS																								
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF	110			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																								
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																								

EQL	BTEX					TRH							TPH					Aldrin	Dieldrin	Aldrin + Dieldrin	DDD	DDT	4,4-DDE	DDT+DDE+DDD
	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene Total	C6-ClO	C6-ClO (F1 minus BTEX)	ClO-C16	ClO-C16 (F2 minus Naphthalene)	Cl16-C34	C34-C40	ClO-C40 (Sum of total)	C6-C9	ClO-C14	Cl15-C28	C29-C36	+ClO-C36 (Sum of total)							
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Th	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	0.05	0.05	0.05	0.05
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Th																								
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Th																								
EPA PFAS Classification - Tunnel Zone - No option for disposal thre																								
EPA Victoria IWRG621 Category B Leached Upper Limits																								
EPA Victoria IWRG621 Category B Upper Limits													2,600				40,000			4.8				50
EPA Victoria IWRG621 Category C Leached Upper Limits																								
EPA Victoria IWRG621 Category C Upper Limits													650				10,000			1.2				50
EPA Victoria IWRG621 Fill Upper Limits													100				1,000							

Location Code	Field ID	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene Total	C6-ClO	C6-ClO (F1 minus BTEX)	ClO-C16	ClO-C16 (F2 minus Naphthalene)	Cl16-C34	C34-C40	ClO-C40 (Sum of total)	C6-C9	ClO-C14	Cl15-C28	C29-C36	+ClO-C36 (Sum of total)	Aldrin	Dieldrin	Aldrin + Dieldrin	DDD	DDT	4,4-DDE	DDT+DDE+DDD
D07.02	SX_IB_20220518_11_51_SS_Primary_ALS	<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	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220518_11_51_SS_Primary_ALS																								
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF	<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	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF																								
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF																								
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF	<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	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																								
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																								
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF	<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	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF																								
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF																								
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS	<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	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS																								
D07.02	SX_IB_20220518_15_54_SS_Primary_ALS	<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	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220518_15_54_SS_Primary_ALS																								
D07.02	SX_IB_20220518_23_55_SS_Primary_ALS	<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	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220518_23_55_SS_Primary_ALS																								
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	37	<50	<50	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF																								
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF																								
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF	<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	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF																								
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF																								
D07.02	SX_IB_20220519_04_11_SS_Primary_ALS	<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	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220519_04_11_SS_Primary_ALS																								
D07.02	SX_IB_20220519_07_51_SS_Primary_ALS	<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	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220519_07_51_SS_Primary_ALS																								
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF	<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	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF																								
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF																								
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	<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	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS																								
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS	<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	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS																								
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF	<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	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																								
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																								

	Organochlorine Pesticides																								
	Endosulfan I	Endosulfan II	Endrin	Endrin ketone	Endrin aldehyde	Endosulfan sulphate	Chlordane	Chlordane (cis)	Chlordane (trans)	Hexachlorobenzene	Heptachlor	Heptachlor epoxide	a-BHC	b-BHC	d-BHC	g-BHC (Lindane)	Methoxychlor	Toxaphene	Organochlorine pesticides EPA/C	Other organochlorine pesticides EPA/C	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	
EQL	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Th	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.03	0.03	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5	0.1	0.03	0.5	0.5	1	1	
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Th																									
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Th																									
EPA PFAS Classification - Tunnel Zone - No option for disposal thre																									
EPA Victoria IWRG621 Category B Leached Upper Limits																									
EPA Victoria IWRG621 Category B Upper Limits							16				4.8									50					
EPA Victoria IWRG621 Category C Leached Upper Limits																									
EPA Victoria IWRG621 Category C Upper Limits							4				1.2									10					
EPA Victoria IWRG621 Fill Upper Limits																			1						

Location Code	Field ID																								
D07.02	SX_IB_20220518_11_51_SS_Primary_ALS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.50	<0.50	<1.00	<1.00	
D07.02	SX_IB_20220518_11_51_SS_Primary_ALS																								
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5	<0.5	<1	<1	
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF																								
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF																								
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5	<0.5	<1	<1	
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																								
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																								
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5	<0.5	<1	<1	
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF																								
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF																								
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.50	<0.50	<1.00	<1.00	
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS																								
D07.02	SX_IB_20220518_15_54_SS_Primary_ALS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.50	<0.50	<1.00	<1.00	
D07.02	SX_IB_20220518_15_54_SS_Primary_ALS																								
D07.02	SX_IB_20220518_23_55_SS_Primary_ALS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.50	<0.50	<1.00	<1.00	
D07.02	SX_IB_20220518_23_55_SS_Primary_ALS																								
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5	<0.5	<1	<1	
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF																								
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF																								
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5	<0.5	<1	<1	
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF																								
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF																								
D07.02	SX_IB_20220519_04_11_SS_Primary_ALS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.50	<0.50	<1.00	<1.00	
D07.02	SX_IB_20220519_04_11_SS_Primary_ALS																								
D07.02	SX_IB_20220519_07_51_SS_Primary_ALS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.50	<0.50	<1.00	<1.00	
D07.02	SX_IB_20220519_07_51_SS_Primary_ALS																								
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5	<0.5	<1	<1	
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF																								
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF																								
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.50	<0.50	<1.00	<1.00	
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS																								
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.50	<0.50	<1.00	<1.00	
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS																								
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1	<0.5	<0.5	<1	<1	
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																								
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																								

		Phenols																						
	2,6-Dichlorophenol	4-chloro-3-methylphenol	Pentachlorophenol	2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4,6-Dinitro-2-methylphenol	Tetrachlorophenols	2,3,5,6-Tetrachlorophenol	Cresol Total	4,6-Dinitro-o-cyclohexyl phenol	Phenols (halogenated) EPAVIC	Phenols (non-halogenated) EPAVIC	2,4-Dimethylphenol	2-Methylphenol	2-Nitrophenol	2,4-Dinitrophenol	3&4-Methylphenol (m&p-cresol)	4-Nitrophenol	Dinoseb	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	8:2 Fluorotelomer sulfonic	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/L
EQL	0.5	1	1	0.05	5	10	0.03	0.5	20	1	20	0.5	0.2	1	5	0.4	5	20	0.5	1	20	0.00001	0.005	0.00001
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Th																								
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Th																								
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Th																								
EPA PFAS Classification - Tunnel Zone - No option for disposal thre																								
EPA Victoria IWRG621 Category B Leached Upper Limits																								
EPA Victoria IWRG621 Category B Upper Limits										320	2,200													
EPA Victoria IWRG621 Category C Leached Upper Limits																								
EPA Victoria IWRG621 Category C Upper Limits										10	560													
EPA Victoria IWRG621 Fill Upper Limits										1	60													

Location Code	Field ID	2,6-Dichlorophenol	4-chloro-3-methylphenol	Pentachlorophenol	2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4,6-Dinitro-2-methylphenol	Tetrachlorophenols	2,3,5,6-Tetrachlorophenol	Cresol Total	4,6-Dinitro-o-cyclohexyl phenol	Phenols (halogenated) EPAVIC	Phenols (non-halogenated) EPAVIC	2,4-Dimethylphenol	2-Methylphenol	2-Nitrophenol	2,4-Dinitrophenol	3&4-Methylphenol (m&p-cresol)	4-Nitrophenol	Dinoseb	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	8:2 Fluorotelomer sulfonic	
D07.02	SX_IB_20220518_11_51_SS_Primary_ALS	<0.50	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1			<0.00005	<0.0050	<0.00005
D07.02	SX_IB_20220518_11_51_SS_Primary_ALS																							<0.00005	<0.00005
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF	<0.5	<1	<1	<5	<10		<0.5	<20				<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1	<20		<0.005	<0.00001
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF																							<0.00001	<0.00001
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF																							<0.00001	<0.00001
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF	<0.5	<1	<1	<5	<10		<0.5	<20				<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1	<20		<0.005	<0.00001
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																							<0.00001	<0.00001
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																							<0.00001	<0.00001
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF	<0.5	<1	<1	<5	<10		<0.5	<20				<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1	<20		<0.005	<0.00001
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF																							<0.00001	<0.00001
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF																							<0.00001	<0.00001
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS	<0.50	<1.00	<1.0	<0.05	<5		<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1				<0.00005	<0.0050	<0.00005
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS																							<0.00005	<0.00005
D07.02	SX_IB_20220518_15_54_SS_Primary_ALS	<0.50	<1.00	<1.0	<0.05	<5		<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1				<0.00005	<0.0050	<0.00005
D07.02	SX_IB_20220518_15_54_SS_Primary_ALS																							<0.00005	<0.00005
D07.02	SX_IB_20220518_23_55_SS_Primary_ALS	<0.50	<1.00	<1.0	<0.05	<5		<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1				<0.00005	<0.0050	<0.00005
D07.02	SX_IB_20220518_23_55_SS_Primary_ALS																							<0.00005	<0.00005
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF	<0.5	<1	<1	<5	<10		<0.5	<20				<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1	<20		<0.005	<0.00001
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF																							<0.00001	<0.00001
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF																							<0.00001	<0.00001
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF	<0.5	<1	<1	<5	<10		<0.5	<20				<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1	<20		<0.005	<0.00001
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF																							<0.00001	<0.00001
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF																							<0.00001	<0.00001
D07.02	SX_IB_20220519_04_11_SS_Primary_ALS	<0.50	<1.00	<1.0	<0.05	<5		<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1				<0.00005	<0.0050	<0.00005
D07.02	SX_IB_20220519_04_11_SS_Primary_ALS																							<0.00005	<0.00005
D07.02	SX_IB_20220519_07_51_SS_Primary_ALS	<0.50	<1.00	<1.0	<0.05	<5		<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1				<0.00005	<0.0050	<0.00005
D07.02	SX_IB_20220519_07_51_SS_Primary_ALS																							<0.00005	<0.00005
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF	<0.5	<1	<1	<5	<10		<0.5	<20				<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1	<20		<0.005	<0.00001
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF																							<0.00001	<0.00001
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF																							<0.00001	<0.00001
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	<0.50	<1.00	<1.0	<0.05	<5		<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1				<0.00005	<0.0050	<0.00005
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS																							<0.00005	<0.00005
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS	<0.50	<1.00	<1.0	<0.05	<5		<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20	<1				<0.00005	<0.0050	<0.00005
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS																							<0.00005	<0.00005
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF	<0.5	<1	<1	<5	<10		<0.5	<20				<0.5	<0.2	<1	<5	<0.4	<5	<20	<0.5	<1	<20		<0.005	<0.00001
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																							<0.00001	<0.00001
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																							<0.00001	<0.00001

	Halogenated Hydrocarbons						MAH						Solvents					SPOCAS
	Chlorobenzene	Iodomethane	Bromomethane	1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Total MAH	Monocyclic aromatic hydrocarbons EPAVic	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone	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	0.5	0.5	0.5	0.5	0.5	0.5	0.1
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Th																		
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Th																		
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Th																		
EPA PFAS Classification - Tunnel Zone - No option for disposal thre																		
EPA Victoria IWRG621 Category B Leached Upper Limits																		
EPA Victoria IWRG621 Category B Upper Limits							240											
EPA Victoria IWRG621 Category C Leached Upper Limits																		
EPA Victoria IWRG621 Category C Upper Limits							70											
EPA Victoria IWRG621 Fill Upper Limits							7											

Location Code	Field ID	Chlorobenzene	Iodomethane	Bromomethane	1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Total MAH	Monocyclic aromatic hydrocarbons EPAVic	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl Ketone	pH (CaCl2)		
D07.02	SX_IB_20220518_11_51_SS_Primary_ALS	<0.50							<0.5		<0.5									8.0	
D07.02	SX_IB_20220518_11_51_SS_Primary_ALS																				
D07.02	SX_IB_20220518_12_40_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	<0.5	<0.5	<0.5		
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF																				
D07.02	SX_IB_20220518_12_40_SS_Primary_EUF																				
D07.02	SX_IB_20220518_15_46_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	<0.5	<0.5	<0.5		
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																				
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																				
D07.02	SX_IB_20220518_15_50_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	<0.5	<0.5	<0.5		
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF																				
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF																				
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS	<0.50							<0.5		<0.5										8.5
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS																				
D07.02	SX_IB_20220518_15_54_SS_Primary_ALS	<0.50							<0.5		<0.5										7.8
D07.02	SX_IB_20220518_15_54_SS_Primary_ALS																				
D07.02	SX_IB_20220518_23_55_SS_Primary_ALS	<0.50							<0.5		<0.5										7.8
D07.02	SX_IB_20220518_23_55_SS_Primary_ALS																				
D07.02	SX_IB_20220519_00_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	<0.5	<0.5	<0.5		
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF																				
D07.02	SX_IB_20220519_00_05_SS_Primary_EUF																				
D07.02	SX_IB_20220519_04_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	<0.5	<0.5	<0.5		
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF																				
D07.02	SX_IB_20220519_04_05_SS_Primary_EUF																				
D07.02	SX_IB_20220519_04_11_SS_Primary_ALS	<0.50							<0.5		<0.5										7.8
D07.02	SX_IB_20220519_04_11_SS_Primary_ALS																				
D07.02	SX_IB_20220519_07_51_SS_Primary_ALS	<0.50							<0.5		<0.5										7.7
D07.02	SX_IB_20220519_07_51_SS_Primary_ALS																				
D07.02	SX_IB_20220519_07_51_SS_Primary_ALS																				
D07.02	SX_IB_20220519_08_09_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	<0.5	<0.5	<0.5		
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF																				
D07.02	SX_IB_20220519_08_09_SS_Primary_EUF																				
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	<0.50							<0.5		<0.5										7.7
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS																				
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS	<0.50							<0.5		<0.5										7.7
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS																				
D07.02	SX_IB_20220605_11_19_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	<0.5	<0.5	<0.5		
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																				
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																				

		PAH																					
		Tin	Zinc	PAHs (Vic EPA List)	Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RPD		0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS	<10	94	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
E02.02	SX_OB_20220519_08_01_SS_Triplicate_EUF	<10	160			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD		0	52			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS	<10	94	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
E02.02	SX_OB_20220519_08_01_SS_Triplicate_EUF																						
RPD																							
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS																						
E02.02	SX_OB_20220519_08_00_SS_Duplicate_ALS																						
RPD																							
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS																						
E02.02	SX_OB_20220519_08_01_SS_Triplicate_EUF																						
RPD																							
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF	<10	150			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F06.01	SX_OB_20220605_11_29_SS_Duplicate_EUF	<10	94			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD		0	46			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF	<10	150			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F06.01	SX_OB_20220605_11_30_SS_Triplicate_ALS	<10	82	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD		0	59			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF																						
F06.01	SX_OB_20220605_11_29_SS_Duplicate_EUF																						
RPD																							
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF																						
F06.01	SX_OB_20220605_11_29_SS_Duplicate_EUF																						
RPD																							
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF																						
F06.01	SX_OB_20220605_11_30_SS_Triplicate_ALS																						
RPD																							
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS	<10	84	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B04.03	SX_IB_20220605_11_03_SS_Duplicate_ALS	<10	80	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD		0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS	<10	84	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B04.03	SX_IB_20220605_11_04_SS_Triplicate_EUF	<10	110			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD		0	27			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS	<10	84	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B04.03	SX_IB_20220605_11_04_SS_Triplicate_EUF																						
RPD																							
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS																						
B04.03	SX_IB_20220605_11_03_SS_Duplicate_ALS																						
RPD																							
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS																						
B04.03	SX_IB_20220605_11_04_SS_Triplicate_EUF																						
RPD																							
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	<10	87	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS	<10	77	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD		0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	<10	87	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF	<10	110			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD		0	23			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	<10	87	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																						
RPD																							
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS																						
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS																						
RPD																							
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS																						
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																						
RPD																							

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

	Pyrene mg/kg	PAHs (Sum of total) mg/kg	BTEX						TRH							TPH					Aldrin mg/kg	Dieldrin mg/kg	
			Benzene mg/kg	Ethylbenzene mg/kg	Toluene mg/kg	Xylene (o) mg/kg	Xylene (m & p) mg/kg	Xylene Total mg/kg	C6-C10 mg/kg	C6-C10 (F1 minus BTEX) mg/kg	C10-C16 mg/kg	C10-C16 (F2 minus Naphthalene) mg/kg	C16-C34 mg/kg	C34-C40 mg/kg	C10-C40 (Sum of total) mg/kg	C6-C9 mg/kg	C10-C14 mg/kg	C15-C28 mg/kg	C29-C36 mg/kg	H-C10-C36 (Sum of total) mg/kg			
EQL	0.5	0.5	0.1	0.1	0.1	0.1	0.2	0.3	20	20	50	50	100	100	50	20	20	50	50	50	0.05	0.05	
Location Code	Field ID																						
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
RPD		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																						
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF																						
RPD																							
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																						
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF																						
RPD																							
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																						
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS																						
RPD																							
F09.01	SX_IB_20220518_07_55_SS_Primary_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
F09.01	SX_IB_20220518_07_56_SS_Duplicate_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
RPD		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F09.01	SX_IB_20220518_07_55_SS_Primary_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
F09.01	SX_IB_20220518_07_56_SS_Triplicate_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
RPD		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F09.01	SX_IB_20220518_07_55_SS_Primary_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
F09.01	SX_IB_20220518_07_56_SS_Triplicate_EUF																						
RPD																							
F09.01	SX_IB_20220518_07_55_SS_Primary_ALS																						
F09.01	SX_IB_20220518_07_56_SS_Duplicate_ALS																						
RPD																							
F09.01	SX_IB_20220518_07_55_SS_Primary_ALS																						
F09.01	SX_IB_20220518_07_56_SS_Triplicate_EUF																						
RPD																							
D04.02	SX_IB_20220519_15_57_SS_Primary_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
D04.02	SX_IB_20220519_15_57_SS_Duplicate_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D04.02	SX_IB_20220519_15_57_SS_Primary_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
D04.02	SX_IB_20220519_15_58_SS_Triplicate_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
RPD		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D04.02	SX_IB_20220519_15_57_SS_Primary_EUF																						
D04.02	SX_IB_20220519_15_57_SS_Duplicate_EUF																						
RPD																							
D04.02	SX_IB_20220519_15_57_SS_Primary_EUF																						
D04.02	SX_IB_20220519_15_57_SS_Duplicate_EUF																						
RPD																							
D04.02	SX_IB_20220519_15_57_SS_Primary_EUF																						
D04.02	SX_IB_20220519_15_58_SS_Triplicate_ALS																						
RPD																							
D04.02	SX_IB_20220519_20_05_SS_Primary_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
D04.02	SX_IB_20220519_20_05_SS_Duplicate_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D04.02	SX_IB_20220519_20_05_SS_Primary_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
D04.02	SX_IB_20220519_20_06_SS_Triplicate_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
RPD		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D04.02	SX_IB_20220519_20_05_SS_Primary_EUF																						
D04.02	SX_IB_20220519_20_05_SS_Duplicate_EUF																						
RPD																							
D04.02	SX_IB_20220519_20_05_SS_Primary_EUF																						
D04.02	SX_IB_20220519_20_05_SS_Duplicate_EUF																						
RPD																							
D04.02	SX_IB_20220519_20_05_SS_Primary_EUF																						
D04.02	SX_IB_20220519_20_06_SS_Triplicate_ALS																						
RPD																							
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
E02.02	SX_OB																						

		BTEX							TRH							TPH					Aldrin	Dieldrin	
		Pyrene	PAHs (Sum of total)	Benzene	Ethylbenzene	Toluene	Xylene (o)	Xylene (m & p)	Xylene Total	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	C6-C9	C10-C14	C15-C28	C29-C36			C10-C36 (Sum of total)
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
RPD		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
E02.02	SX_OB_20220519_08_01_SS_Triplicate_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	31	<50	<50	<50	<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
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
E02.02	SX_OB_20220519_08_01_SS_Triplicate_EUF																						
RPD																							
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS																						
E02.02	SX_OB_20220519_08_00_SS_Duplicate_ALS																						
RPD																							
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS																						
E02.02	SX_OB_20220519_08_01_SS_Triplicate_EUF																						
RPD																							
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
F06.01	SX_OB_20220605_11_29_SS_Duplicate_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
F06.01	SX_OB_20220605_11_30_SS_Triplicate_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
RPD		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF																						
F06.01	SX_OB_20220605_11_29_SS_Duplicate_EUF																						
RPD																							
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF																						
F06.01	SX_OB_20220605_11_30_SS_Triplicate_ALS																						
RPD																							
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
B04.03	SX_IB_20220605_11_03_SS_Duplicate_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
RPD		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
B04.03	SX_IB_20220605_11_04_SS_Triplicate_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
RPD		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
B04.03	SX_IB_20220605_11_04_SS_Triplicate_EUF																						
RPD																							
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS																						
B04.03	SX_IB_20220605_11_03_SS_Duplicate_ALS																						
RPD																							
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS																						
B04.03	SX_IB_20220605_11_04_SS_Triplicate_EUF																						
RPD																							
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
RPD		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05	<0.05
RPD		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	<0.5		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05	<0.05
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																						
RPD																							
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS																						
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS																						
RPD																							
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS																						
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																						
RPD																							

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

		Organochlorine Pesticides																					
		Aldrin + Dieldrin	DDD	DDT	4,4-DDE	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endrin	Endrin ketone	Endrin aldehyde	Endosulfan sulphate	Chlordane	Chlordane (cis)	Chlordane (trans)	Hexachlorobenzene	Heptachlor	Heptachlor epoxide	α-BHC	β-BHC	δ-BHC	γ-BHC (Lindane)	Methoxychlor
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
E02.02	SX_OB_20220519_08_01_SS_Triplicate_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
E02.02	SX_OB_20220519_08_01_SS_Triplicate_EUF																						
RPD																							
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS																						
E02.02	SX_OB_20220519_08_00_SS_Duplicate_ALS																						
RPD																							
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS																						
E02.02	SX_OB_20220519_08_01_SS_Triplicate_EUF																						
RPD																							
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F06.01	SX_OB_20220605_11_29_SS_Duplicate_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F06.01	SX_OB_20220605_11_30_SS_Triplicate_ALS	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF																						
F06.01	SX_OB_20220605_11_29_SS_Duplicate_EUF																						
RPD																							
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF																						
F06.01	SX_OB_20220605_11_29_SS_Duplicate_EUF																						
RPD																							
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF																						
F06.01	SX_OB_20220605_11_30_SS_Triplicate_ALS																						
RPD																							
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B04.03	SX_IB_20220605_11_03_SS_Duplicate_ALS	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B04.03	SX_IB_20220605_11_04_SS_Triplicate_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B04.03	SX_IB_20220605_11_04_SS_Triplicate_EUF																						
RPD																							
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS																						
B04.03	SX_IB_20220605_11_03_SS_Duplicate_ALS																						
RPD																							
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS																						
B04.03	SX_IB_20220605_11_04_SS_Triplicate_EUF																						
RPD																							
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																						
RPD																							
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS																						
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS																						
RPD																							
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS																						
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																						
RPD																							

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

		Phenols																						
		Toxaphene	Organochlorine pesticides EPA Vc	Other organochlorine pesticides EPA Vc	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 Vc	Phenols (non-halogenated) EPA Vc	2,4-Dimethylphenol	2-Methylphenol	2-Nitrophenol	2,4-Dinitrophenol	
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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		0.5	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	
Location Code	Field ID																							
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF	<0.5	<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
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF	<0.5	<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
RPD		0	0	0	0	0	0	0	0	0	0		0	0		0	0				0	0	0	0
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF	<0.5	<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
D07.02	SX_IB_20220518_15_51_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
RPD			0	0	0	0	0	0	0	0	0		0				0				0	0	0	0
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																							
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF																							
RPD																								
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																							
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF																							
RPD																								
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF																							
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS																							
RPD																								
F09.01	SX_IB_20220518_07_55_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
F09.01	SX_IB_20220518_07_56_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
RPD			0	0	0	0	0	0	0	0	0		0		0		0	0	0		0	0	0	0
F09.01	SX_IB_20220518_07_55_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
F09.01	SX_IB_20220518_07_56_SS_Triplicate_EUF	<0.5	<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
RPD			0	0	0	0	0	0	0	0	0		0				0				0	0	0	0
F09.01	SX_IB_20220518_07_55_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
F09.01	SX_IB_20220518_07_56_SS_Triplicate_EUF																							
RPD																								
F09.01	SX_IB_20220518_07_55_SS_Primary_ALS																							
F09.01	SX_IB_20220518_07_56_SS_Duplicate_ALS																							
RPD																								
F09.01	SX_IB_20220518_07_55_SS_Primary_ALS																							
F09.01	SX_IB_20220518_07_56_SS_Triplicate_EUF																							
RPD																								
D04.02	SX_IB_20220519_15_57_SS_Primary_EUF	<0.5	<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
D04.02	SX_IB_20220519_15_57_SS_Duplicate_EUF	<0.5	<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
RPD		0	0	0	0	0	0	0	0	0	0		0	0		0	0				0	0	0	0
D04.02	SX_IB_20220519_15_57_SS_Primary_EUF	<0.5	<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
D04.02	SX_IB_20220519_15_58_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
RPD			0	0	0	0	0	0	0	0	0		0				0				0	0	0	0
D04.02	SX_IB_20220519_15_57_SS_Primary_EUF																							
D04.02	SX_IB_20220519_15_57_SS_Duplicate_EUF																							
RPD																								
D04.02	SX_IB_20220519_15_57_SS_Primary_EUF																							
D04.02	SX_IB_20220519_15_57_SS_Duplicate_EUF																							
RPD																								
D04.02	SX_IB_20220519_15_57_SS_Primary_EUF																							
D04.02	SX_IB_20220519_15_58_SS_Triplicate_ALS																							
RPD																								
D04.02	SX_IB_20220519_20_05_SS_Primary_EUF	<0.5	<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
D04.02	SX_IB_20220519_20_05_SS_Duplicate_EUF	<0.5	<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
RPD		0	0	0	0	0	0	0	0	0	0		0	0		0	0				0	0	0	0
D04.02	SX_IB_20220519_20_05_SS_Primary_EUF	<0.5	<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
D04.02	SX_IB_20220519_20_06_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
RPD			0	0	0	0	0	0	0	0	0		0				0				0	0	0	0
D04.02	SX_IB_20220519_20_05_SS_Primary_EUF																							
D04.02	SX_IB_20220519_20_05_SS_Duplicate_EUF																							
RPD																								
D04.02	SX_IB_20220519_20_05_SS_Primary_EUF																							
D04.02	SX_IB_20220519_20_05_SS_Duplicate_EUF																							
RPD																								
D04.02	SX_IB_20220519_20_05_SS_Primary_EUF																							
D04.02	SX_IB_20220519_20_06_SS_Triplicate_ALS																							
RPD																								
E02.02	SX_OB_20220519_07_59_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
E02.02	SX_OB_20220519_08_00_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

		Phenols																					
		Toxaphene	Organochlorine pesticides EPA Vc	Other organochlorine pesticides EPA Vc	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 Vc	Phenols (non-halogenated) EPA Vc	2,4-Dimethylphenol	2-Methylphenol	2-Nitrophenol	2,4-Dinitrophenol
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E02.02	SX_OB_20220519_07_59_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
E02.02	SX_OB_20220519_08_01_SS_Triplicate_EUF	<0.5	<0.1	<0.1	<0.5	<0.5	<1	<1	<0.5	<1	<1	<0.05	<5	<10		<0.5	<20			<0.5	<0.2	<1	<5
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E02.02	SX_OB_20220519_07_59_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
E02.02	SX_OB_20220519_08_01_SS_Triplicate_EUF																						
RPD																							
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS																						
E02.02	SX_OB_20220519_08_00_SS_Duplicate_ALS																						
RPD																							
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS																						
E02.02	SX_OB_20220519_08_01_SS_Triplicate_EUF																						
RPD																							
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF	<0.5	<0.1	<0.1	<0.5	<0.5	<1	<1	<0.5	<1	<1	<0.05	<5	<10		<0.5	<20			<0.5	<0.2	<1	<5
F06.01	SX_OB_20220605_11_29_SS_Duplicate_EUF	<0.5	<0.1	<0.1	<0.5	<0.5	<1	<1	<0.5	<1	<1	<0.05	<5	<10		<0.5	<20			<0.5	<0.2	<1	<5
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF	<0.5	<0.1	<0.1	<0.5	<0.5	<1	<1	<0.5	<1	<1	<0.05	<5	<10		<0.5	<20			<0.5	<0.2	<1	<5
F06.01	SX_OB_20220605_11_30_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
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF																						
F06.01	SX_OB_20220605_11_29_SS_Duplicate_EUF																						
RPD																							
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF																						
F06.01	SX_OB_20220605_11_30_SS_Triplicate_ALS																						
RPD																							
B04.03	SX_IB_20220605_11_03_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
B04.03	SX_IB_20220605_11_03_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
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B04.03	SX_IB_20220605_11_03_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
B04.03	SX_IB_20220605_11_04_SS_Triplicate_EUF	<0.5	<0.1	<0.1	<0.5	<0.5	<1	<1	<0.5	<1	<1	<0.05	<5	<10		<0.5	<20			<0.5	<0.2	<1	<5
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B04.03	SX_IB_20220605_11_03_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
B04.03	SX_IB_20220605_11_04_SS_Triplicate_EUF																						
RPD																							
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS																						
B04.03	SX_IB_20220605_11_03_SS_Duplicate_ALS																						
RPD																							
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS																						
B04.03	SX_IB_20220605_11_04_SS_Triplicate_EUF																						
RPD																							
D07.02	SX_IB_20220605_11_16_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
D07.02	SX_IB_20220605_11_18_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
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D07.02	SX_IB_20220605_11_16_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
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF	<0.5	<0.1	<0.1	<0.5	<0.5	<1	<1	<0.5	<1	<1	<0.05	<5	<10		<0.5	<20			<0.5	<0.2	<1	<5
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D07.02	SX_IB_20220605_11_16_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
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																						
RPD																							
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS																						
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS																						
RPD																							
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS																						
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF																						
RPD																							

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

		PFOS/PFOA																								
EQL	mg/L	mg/kg	N-methylperfluorooctane sulfonamideacetic acid (NMeFOCAA)		N-Methylperfluorooctanesulfonamideethanol (NMeFOSEA)		Perfluorobutanoic acid (PFBA)		Perfluorobutane sulfonic acid (PFBS)		Perfluorodecanoic acid (PFDA)		Perfluorododecanoic acid (PFDDA)		Perfluorodecanesulfonic acid (PFDS)		Perfluoroheptanoic acid (PFHpA)		Perfluoroheptane sulfonic acid (PFHps)		Perfluorohexanoic acid (PFHxA)		Perfluorononanoic acid (PFNA)			
			mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg
EQ	0.00005	0.01	0.00005	0.005	0.00005	0.005	0.00005	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005	0.00001	0.005
Location Code	Field ID																									
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF		<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF		<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF		<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS		<0.00005	<0.0100	<0.00005	<0.0050	<0.0001	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F09.01	SX_IB_20220518_07_55_SS_Primary_ALS		<0.00005	<0.0100	<0.00005	<0.0050	<0.0001	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050
F09.01	SX_IB_20220518_07_56_SS_Duplicate_ALS		<0.00005	<0.0100	<0.00005	<0.0050	<0.0001	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D04.02	SX_IB_20220519_15_57_SS_Primary_EUF		<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
D04.02	SX_IB_20220519_15_57_SS_Duplicate_EUF		<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
RPD			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

EQL	enated Hydrocarbons			MAH						Solvents					SPOCAS
	1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Total MAH	Monocyclic aromatic hydrocarbons EPAV/c	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl Ketone	pH (CaCl2)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1

Location Code	Field ID	1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Total MAH	Monocyclic aromatic hydrocarbons EPAV/c	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl Ketone	pH (CaCl2)
D07.02	SX_IB_20220518_15_46_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	
D07.02	SX_IB_20220518_15_50_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	
RPD		0	0	0	0		0	0	0	0	0	0	0	0	0	
D07.02	SX_IB_20220518_15_46_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	
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS					<0.5		<0.5								8.5
RPD								0								
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF															
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF															
RPD																
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF															
D07.02	SX_IB_20220518_15_50_SS_Duplicate_EUF															
RPD																
D07.02	SX_IB_20220518_15_46_SS_Primary_EUF															
D07.02	SX_IB_20220518_15_51_SS_Triplicate_ALS															
RPD																
F09.01	SX_IB_20220518_07_55_SS_Primary_ALS					<0.5		<0.5								7.7
F09.01	SX_IB_20220518_07_56_SS_Duplicate_ALS					<0.5		<0.5								7.7
RPD						0		0								0
F09.01	SX_IB_20220518_07_55_SS_Primary_ALS					<0.5		<0.5								7.7
F09.01	SX_IB_20220518_07_56_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	
RPD								0								
F09.01	SX_IB_20220518_07_55_SS_Primary_ALS					<0.5		<0.5								7.7
F09.01	SX_IB_20220518_07_56_SS_Triplicate_EUF															
RPD																
F09.01	SX_IB_20220518_07_55_SS_Primary_ALS															
F09.01	SX_IB_20220518_07_56_SS_Duplicate_ALS															
RPD																
F09.01	SX_IB_20220518_07_55_SS_Primary_ALS															
F09.01	SX_IB_20220518_07_56_SS_Triplicate_EUF															
RPD																
D04.02	SX_IB_20220519_15_57_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	
D04.02	SX_IB_20220519_15_57_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	
RPD		0	0	0	0		0	0	0	0	0	0	0	0	0	
D04.02	SX_IB_20220519_15_57_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	
D04.02	SX_IB_20220519_15_58_SS_Triplicate_ALS					<0.5		<0.5								7.6
RPD								0								
D04.02	SX_IB_20220519_15_57_SS_Primary_EUF															
D04.02	SX_IB_20220519_15_57_SS_Duplicate_EUF															
RPD																
D04.02	SX_IB_20220519_15_57_SS_Primary_EUF															
D04.02	SX_IB_20220519_15_57_SS_Duplicate_EUF															
RPD																
D04.02	SX_IB_20220519_15_57_SS_Primary_EUF															
D04.02	SX_IB_20220519_15_58_SS_Triplicate_ALS															
RPD																
D04.02	SX_IB_20220519_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	
D04.02	SX_IB_20220519_20_05_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	
RPD		0	0	0	0		0	0	0	0	0	0	0	0	0	
D04.02	SX_IB_20220519_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	
D04.02	SX_IB_20220519_20_06_SS_Triplicate_ALS					<0.5		<0.5								7.7
RPD								0								
D04.02	SX_IB_20220519_20_05_SS_Primary_EUF															
D04.02	SX_IB_20220519_20_05_SS_Duplicate_EUF															
RPD																
D04.02	SX_IB_20220519_20_05_SS_Primary_EUF															
D04.02	SX_IB_20220519_20_05_SS_Duplicate_EUF															
RPD																
D04.02	SX_IB_20220519_20_05_SS_Primary_EUF															
D04.02	SX_IB_20220519_20_06_SS_Triplicate_ALS															
RPD																
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS					<0.5		<0.5								7.9
E02.02	SX_OB_20220519_08_00_SS_Duplicate_ALS					<0.5		<0.5								7.7

		enated Hydrocarbons			MAH					Solvents					SPOCAS	
		1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Total MAH	Monocyclic aromatic hydrocarbons EPAVic	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl Ketone	pH (CaCl2)
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
RPD						0		0								3
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS					<0.5		<0.5								7.9
E02.02	SX_OB_20220519_08_01_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	
RPD								0								
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS					<0.5		<0.5								7.9
E02.02	SX_OB_20220519_08_01_SS_Triplicate_EUF															
RPD																
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS															
E02.02	SX_OB_20220519_08_00_SS_Duplicate_ALS															
RPD																
E02.02	SX_OB_20220519_07_59_SS_Primary_ALS															
E02.02	SX_OB_20220519_08_01_SS_Triplicate_EUF															
RPD																
F06.01	SX_OB_20220605_11_29_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	
F06.01	SX_OB_20220605_11_29_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	
RPD		0	0	0	0		0	0	0	0	0	0	0	0	0	
F06.01	SX_OB_20220605_11_29_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	
F06.01	SX_OB_20220605_11_30_SS_Triplicate_ALS					<0.5		<0.5								7.8
RPD								0								
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF															
F06.01	SX_OB_20220605_11_29_SS_Duplicate_EUF															
RPD																
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF															
F06.01	SX_OB_20220605_11_29_SS_Duplicate_EUF															
RPD																
F06.01	SX_OB_20220605_11_29_SS_Primary_EUF															
F06.01	SX_OB_20220605_11_30_SS_Triplicate_ALS															
RPD																
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS					<0.5		<0.5								8.0
B04.03	SX_IB_20220605_11_03_SS_Duplicate_ALS					<0.5		<0.5								7.8
RPD						0		0								3
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS					<0.5		<0.5								8.0
B04.03	SX_IB_20220605_11_04_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	
RPD								0								
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS					<0.5		<0.5								8.0
B04.03	SX_IB_20220605_11_04_SS_Triplicate_EUF															
RPD																
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS															
B04.03	SX_IB_20220605_11_03_SS_Duplicate_ALS															
RPD																
B04.03	SX_IB_20220605_11_03_SS_Primary_ALS															
B04.03	SX_IB_20220605_11_04_SS_Triplicate_EUF															
RPD																
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS					<0.5		<0.5								7.7
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS					<0.5		<0.5								7.7
RPD						0		0								0
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS					<0.5		<0.5								7.7
D07.02	SX_IB_20220605_11_19_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	
RPD								0								
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS					<0.5		<0.5								7.7
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF															
RPD																
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS															
D07.02	SX_IB_20220605_11_18_SS_Duplicate_ALS															
RPD																
D07.02	SX_IB_20220605_11_16_SS_Primary_ALS															
D07.02	SX_IB_20220605_11_19_SS_Triplicate_EUF															
RPD																

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

TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	D07.0220220531104240_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 Uncensored Full Data Sets

User Selected Options

Date/Time of Computation ProUCL 5.114/06/2022 3:17:58 PM
 From File WorkSheet.xls
 Full Precision OFF
 Confidence Coefficient 95%
 Number of Bootstrap Operations 2000

Arsenic

General Statistics

Total Number of Observations	15	Number of Distinct Observations	11
		Number of Missing Observations	0
Minimum	14	Mean	27.8
Maximum	43	Median	27
SD	8.546	Std. Error of Mean	2.206
Coefficient of Variation	0.307	Skewness	0.48

Normal GOF Test

Shapiro Wilk Test Statistic	0.946	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.881	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.138	Lilliefors GOF Test
5% Lilliefors Critical Value	0.22	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 31.69

95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995) 31.72
 95% Modified-t UCL (Johnson-1978) 31.73

Gamma GOF Test

A-D Test Statistic	0.261	Anderson-Darling Gamma GOF Test
5% A-D Critical Value	0.737	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.122	Kolmogorov-Smirnov Gamma GOF Test
5% K-S Critical Value	0.221	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	11.33	k star (bias corrected MLE)	9.109
Theta hat (MLE)	2.454	Theta star (bias corrected MLE)	3.052
nu hat (MLE)	339.9	nu star (bias corrected)	273.3
MLE Mean (bias corrected)	27.8	MLE Sd (bias corrected)	9.211
		Approximate Chi Square Value (0.05)	236
Adjusted Level of Significance	0.0324	Adjusted Chi Square Value	231.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50) 32.19 95% Adjusted Gamma UCL (use when n<50) 32.78

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.965	Shapiro Wilk Lognormal GOF Test
5% Shapiro Wilk Critical Value	0.881	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.139	Lilliefors Lognormal GOF Test
5% Lilliefors Critical Value	0.22	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.639	Mean of logged Data	3.28
Maximum of Logged Data	3.761	SD of logged Data	0.313

Assuming Lognormal Distribution

95% H-UCL	32.71	90% Chebyshev (MVUE) UCL	34.65
95% Chebyshev (MVUE) UCL	37.75	97.5% Chebyshev (MVUE) UCL	42.04
99% Chebyshev (MVUE) UCL	50.48		

Nonparametric Distribution Free UCL Statistics

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

Nonparametric Distribution Free UCLs

95% CLT UCL	31.43	95% Jackknife UCL	31.69
95% Standard Bootstrap UCL	31.23	95% Bootstrap-t UCL	32.25
95% Hall's Bootstrap UCL	31.65	95% Percentile Bootstrap UCL	31.4
95% BCA Bootstrap UCL	31.6		
90% Chebyshev(Mean, Sd) UCL	34.42	95% Chebyshev(Mean, Sd) UCL	37.42
97.5% Chebyshev(Mean, Sd) UCL	41.58	99% Chebyshev(Mean, Sd) UCL	49.75

Suggested UCL to Use

95% Student's-t UCL	31.69
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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	15	Number of Distinct Observations	13
		Number of Missing Observations	0
Minimum	144	Mean	194.5
Maximum	260	Median	186
SD	33.24	Std. Error of Mean	8.582
Coefficient of Variation	0.171	Skewness	0.575

Normal GOF Test

Shapiro Wilk Test Statistic	0.951
5% Shapiro Wilk Critical Value	0.881
Lilliefors Test Statistic	0.189
5% Lilliefors Critical Value	0.22

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	209.6
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95% UCLs (Adjusted for Skewness)

95% Adjusted-CLT UCL (Chen-1995)	209.9
95% Modified-t UCL (Johnson-1978)	209.8

Gamma GOF Test

A-D Test Statistic	0.279
5% A-D Critical Value	0.735
K-S Test Statistic	0.173
5% K-S Critical Value	0.221

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)	37.84	k star (bias corrected MLE)	30.31
Theta hat (MLE)	5.14	Theta star (bias corrected MLE)	6.415
nu hat (MLE)	1135	nu star (bias corrected)	909.4
MLE Mean (bias corrected)	194.5	MLE Sd (bias corrected)	35.32
		Approximate Chi Square Value (0.05)	840.4
Adjusted Level of Significance	0.0324	Adjusted Chi Square Value	832.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when $n \geq 50$) 210.4 95% Adjusted Gamma UCL (use when $n < 50$) 212.5

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.971	Shapiro Wilk Lognormal GOF Test
5% Shapiro Wilk Critical Value	0.881	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.161	Lilliefors Lognormal GOF Test
5% Lilliefors Critical Value	0.22	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	4.97	Mean of logged Data	5.257
Maximum of Logged Data	5.561	SD of logged Data	0.168

Assuming Lognormal Distribution

95% H-UCL	210.9	90% Chebyshev (MVUE) UCL	219.8
95% Chebyshev (MVUE) UCL	231.3	97.5% Chebyshev (MVUE) UCL	247.2
99% Chebyshev (MVUE) UCL	278.6		

Nonparametric Distribution Free UCL Statistics

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

Nonparametric Distribution Free UCLs

95% CLT UCL	208.6	95% Jackknife UCL	209.6
95% Standard Bootstrap UCL	208.1	95% Bootstrap-t UCL	210.9
95% Hall's Bootstrap UCL	212.1	95% Percentile Bootstrap UCL	209.3
95% BCA Bootstrap UCL	209.7		
90% Chebyshev(Mean, Sd) UCL	220.2	95% Chebyshev(Mean, Sd) UCL	231.9
97.5% Chebyshev(Mean, Sd) UCL	248.1	99% Chebyshev(Mean, Sd) UCL	279.9

Suggested UCL to Use

95% Student's-t UCL 209.6

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.

TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	D07.0220220531104240_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	JC0827	Project Manager	Craig Trimbur	Sampler(s)	Dayle B - EP Risk
Address	Unit H76, 63-65 Turner St, Port Melbourne VIC 3207	Project Name	WGTP-Tunnel Ref: 20220518044707-Eurofin-21	EDD Format	ESdat	Handed over by	
Contact Name	Craig Trimbur David Lawson	Analysis	Spoil Sample Preparation			Email for Invoice	finance@agenenviro.com.au LabReports.TST@agenenviro.com.au
Phone No	+61 400 926 907 (Craig) +61 490 411 004 (David)	Special Directions	Subs: WGTP-R (FRAH/PAH/Phenols/OCF/PCB/PCP/Very Chloride Metals) (As, Cd, Cr, Cu, Ni, Pb, Ag, Sn, Mo, Se, Zn) Cr6+/CNV Total Fluoride pH PFAS Extended Suite - 0.1-5ug/kg ASLP PH I - PFAS 0.01-0.05 ug/l ASLP Phragipol - PFAS 0.01-0.05ug/l			Email for Results	LabReports.TST@agenenviro.com.au agenenvironmental@esdat.com.au mothuhublabresults@wgtp.com.au Amrit.Kaur@agile-analytics.com.au
Purchase Order		Quote ID No	Agon WGTP TST			Containers	Required Turnaround Time (TAT) Overnight will be 5 days if not 1-3 day

No	Client Sample ID	Sampled Date/Time	Matrix	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	50mL PFAS bottle	Jar (Class or HDPE)	Other (specify AS/NZS 4586:04 Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	SX_IB_20220518_07_56_SS_Triplicate_EUF	18/05/2022 07:58	S	X	X	X	X	X				1
2	SX_IB_20220518_08_00_SS_Primary_EUF	18/05/2022 08:00	S	X	X	X	X	X				1
3	SX_IB_20220518_08_29_SB_Blank_EUF	18/05/2022 08:29	W				X					1
4	SX_IB_20220518_08_27_SR_Rinsate_EUF	18/05/2022 08:27	W				X					1
5	SX_OB_20220518_12_31_SS_Primary_EUF	18/05/2022 12:31	S	X	X	X	X	X				1
6	SX_IB_20220518_12_40_SS_Primary_EUF	18/05/2022 12:40	S	X	X	X	X	X				1
7	SX_IB_20220518_15_46_SS_Primary_EUF	18/05/2022 15:46	S	X	X	X	X	X				1
8	SX_IB_20220518_15_50_SS_Duplicate_EUF	18/05/2022 15:50	S	X	X	X	X	X				1
9	SX_OB_20220518_18_54_SS_Primary_EUF	18/05/2022 18:54	S	X	X	X	X	X				1
10	SX_IB_20220518_00_05_SS_Primary_EUF	08/05/2022 00:05	S	X	X	X	X	X				1
11	SX_IB_20220518_04_05_SS_Primary_EUF	18/05/2022 04:05	S	X	X	X	X	X				1
12	SX_OB_20220518_04_18_SS_Primary_EUF	18/05/2022 04:18	S	X	X	X	X	X				1
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												

Method of Shipment: Courier # Hand Delivered Postal

Signature: *Hannick* Date: 19/5/22 Time: 13:03

Received By: *Jake* Date: 19/5 Time: 1:05 Temperature: 13.03

Signature: *[Signature]* Date: 19/5 Time: 1:05 Report No: 889872

Dandenong

889872

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 **889872-L**
Project name **20220519044707-Eurofin-21**
Project ID **JC0927**
Received Date **May 19, 2022**

Client Sample ID			SX_IB_202205 18_07_56_SS Triplicate_EUF	SX_IB_202205 18_08_00_SS Primary_EUF	SX_OB_20220 518_12_31_SS _Primary_EUF	SX_IB_202205 18_12_40_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- My0045141	M22- My0045142	M22- My0045143	M22- My0045144
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 18, 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	4.9	4.9	4.9	4.9
pH (off)	0.1	pH Units	5.3	5.3	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 (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	%	107	87	103	127
13C5-PFPeA (surr.)	1	%	72	64	71	82
13C5-PFHxA (surr.)	1	%	94	75	102	109
13C4-PFHpA (surr.)	1	%	82	70	99	96
13C8-PFOA (surr.)	1	%	60	63	109	65
13C5-PFNA (surr.)	1	%	77	68	80	99
13C6-PFDA (surr.)	1	%	91	78	97	111
13C2-PFUnDA (surr.)	1	%	100	82	80	115
13C2-PFDoDA (surr.)	1	%	113	94	96	123
13C2-PFTeDA (surr.)	1	%	122	120	100	121
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

Client Sample ID			SX_IB_202205 18_07_56_SS TriPLICATE_EUF	SX_IB_202205 18_08_00_SS Primary_EUF	SX_OB_20220 518_12_31_SS _Primary_EUF	SX_IB_202205 18_12_40_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- My0045141	M22- My0045142	M22- My0045143	M22- My0045144
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 18, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
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	%	93	74	89	111
D3-N-MeFOSA (surr.)	1	%	112	117	75	151
D5-N-EtFOSA (surr.)	1	%	106	101	70	134
D7-N-MeFOSE (surr.)	1	%	87	100	71	102
D9-N-EtFOSE (surr.)	1	%	122	105	111	139
D5-N-EtFOSAA (surr.)	1	%	106	108	128	122
D3-N-MeFOSAA (surr.)	1	%	113	85	100	123
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	%	55	62	82	56
18O2-PFHxS (surr.)	1	%	85	72	85	93
13C8-PFOS (surr.)	1	%	85	69	87	109
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	%	85	71	67	110
13C2-6:2 FTSA (surr.)	1	%	80	66	59	94
13C2-8:2 FTSA (surr.)	1	%	54	73	56	64
13C2-10:2 FTSA (surr.)	1	%	102	80	75	104
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_IB_202205 18_15_46_SS Primary_EUF	SX_IB_202205 18_15_50_SS Duplicate_EUF	SX_OB_20220 518_19_54_SS Primary_EUF	SX_IB_202205 19_00_05_SS Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0
Eurofins Sample No.			M22- My0045145	M22- My0045146	M22- My0045147	M22- My0045148
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 09, 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	4.9	4.9	4.9	4.9
pH (off)	0.1	pH Units	5.1	5.1	5.1	5.1
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	%	107	98	62	86
13C5-PFPeA (surr.)	1	%	73	60	69	56
13C5-PFHxA (surr.)	1	%	89	82	62	70
13C4-PFHpA (surr.)	1	%	77	77	65	84
13C8-PFOA (surr.)	1	%	59	56	62	68
13C5-PFNA (surr.)	1	%	76	76	68	62
13C6-PFDA (surr.)	1	%	87	93	83	81
13C2-PFUnDA (surr.)	1	%	91	86	80	76
13C2-PFDoDA (surr.)	1	%	99	94	53	73
13C2-PFTeDA (surr.)	1	%	103	120	71	122
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	%	88	75	52	79
D3-N-MeFOSA (surr.)	1	%	106	93	39	83
D5-N-EtFOSA (surr.)	1	%	110	93	40	78
D7-N-MeFOSE (surr.)	1	%	103	95	53	62
D9-N-EtFOSE (surr.)	1	%	114	102	73	101
D5-N-EtFOSAA (surr.)	1	%	102	115	57	87
D3-N-MeFOSAA (surr.)	1	%	87	81	60	81

Client Sample ID			SX_IB_202205 18_15_46_SS Primary_EUF	SX_IB_202205 18_15_50_SS Duplicate_EUF	SX_OB_20220 518_19_54_SS _Primary_EUF	SX_IB_202205 19_00_05_SS Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0
Eurofins Sample No.			M22- My0045145	M22- My0045146	M22- My0045147	M22- My0045148
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 09, 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	%	50	56	52	68
18O2-PFHxS (surr.)	1	%	84	82	70	71
13C8-PFOS (surr.)	1	%	83	85	50	62
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	%	87	83	55	68
13C2-6:2 FTSA (surr.)	1	%	76	68	69	78
13C2-8:2 FTSA (surr.)	1	%	56	57	61	60
13C2-10:2 FTSA (surr.)	1	%	108	77	62	69
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_IB_202205 19_04_05_SS Primary_EUF	SX_OB_20220 519_04_18_SS _Primary_EUF	SX_IB_202205 18_07_56_SS TriPLICATE_EUF	SX_IB_202205 18_08_00_SS Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0045149	M22- My0045150	M22- My0045151	M22- My0045152
Date Sampled			May 19, 2022	May 19, 2022	May 18, 2022	May 18, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{C01}		comment	1.0	1.0	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	4.9	4.9	6.2	6.2
pH (off)	0.1	pH Units	5.1	5.1	6.9	7.3

Client Sample ID			SX_IB_202205 19_04_05_SS Primary_EUF	SX_OB_20220 519_04_18_SS _Primary_EUF	SX_IB_202205 18_07_56_SS Triuplicate_EUF	SX_IB_202205 18_08_00_SS Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0045149	M22- My0045150	M22- My0045151	M22- My0045152
Date Sampled			May 19, 2022	May 19, 2022	May 18, 2022	May 18, 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 (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	%	87	68	125	141
13C5-PFPeA (surr.)	1	%	51	68	111	95
13C5-PFHxA (surr.)	1	%	60	106	52	77
13C4-PFHpA (surr.)	1	%	81	104	121	124
13C8-PFOA (surr.)	1	%	94	51	139	134
13C5-PFNA (surr.)	1	%	68	64	126	144
13C6-PFDA (surr.)	1	%	77	73	140	130
13C2-PFUnDA (surr.)	1	%	70	77	116	130
13C2-PFDoDA (surr.)	1	%	79	94	127	132
13C2-PFTTeDA (surr.)	1	%	120	137	115	125
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	%	73	78	128	149
D3-N-MeFOSA (surr.)	1	%	73	60	38	53
D5-N-EtFOSA (surr.)	1	%	77	69	31	47
D7-N-MeFOSE (surr.)	1	%	76	95	111	120
D9-N-EtFOSE (surr.)	1	%	86	113	131	139
D5-N-EtFOSAA (surr.)	1	%	83	114	97	97
D3-N-MeFOSAA (surr.)	1	%	91	68	128	139
Perfluoroalkyl sulfonic acids (PFSAs)						
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

Client Sample ID			SX_IB_202205 19_04_05_SS Primary_EUF	SX_OB_20220 519_04_18_SS Primary_EUF	SX_IB_202205 18_07_56_SS TriPLICATE_EUF	SX_IB_202205 18_08_00_SS Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0045149	M22- My0045150	M22- My0045151	M22- My0045152
Date Sampled			May 19, 2022	May 19, 2022	May 18, 2022	May 18, 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	%	60	85	107	106
18O2-PFHxS (surr.)	1	%	75	79	144	119
13C8-PFOS (surr.)	1	%	74	68	112	131
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	%	66	54	111	93
13C2-6:2 FTSA (surr.)	1	%	55	72	169	69
13C2-8:2 FTSA (surr.)	1	%	58	56	116	125
13C2-10:2 FTSA (surr.)	1	%	71	95	128	163
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 518_12_31_SS Primary_EUF	SX_IB_202205 18_12_40_SS Primary_EUF	SX_IB_202205 18_15_46_SS Primary_EUF	SX_IB_202205 18_15_50_SS Duplicate_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0045153	M22- My0045154	M22- My0045155	M22- My0045156
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 18, 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	6.2	6.2	6.4	6.2
pH (off)	0.1	pH Units	7.5	8.2	5.6	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 518_12_31_SS _Primary_EUF	SX_IB_202205 18_12_40_SS _Primary_EUF	SX_IB_202205 18_15_46_SS _Primary_EUF	SX_IB_202205 18_15_50_SS _Duplicate_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0045153	M22- My0045154	M22- My0045155	M22- My0045156
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 18, 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	%	110	131	79	133
13C5-PFPeA (surr.)	1	%	109	97	62	101
13C5-PFHxA (surr.)	1	%	134	65	29	58
13C4-PFHpA (surr.)	1	%	107	121	73	139
13C8-PFOA (surr.)	1	%	111	148	100	127
13C5-PFNA (surr.)	1	%	107	131	89	134
13C6-PFDA (surr.)	1	%	119	146	61	142
13C2-PFUnDA (surr.)	1	%	116	129	56	125
13C2-PFDoDA (surr.)	1	%	123	124	97	127
13C2-PFTeDA (surr.)	1	%	129	125	32	107
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	%	129	138	23	132
D3-N-MeFOSA (surr.)	1	%	79	41	17	59
D5-N-EtFOSA (surr.)	1	%	82	40	12	53
D7-N-MeFOSE (surr.)	1	%	111	116	10	126
D9-N-EtFOSE (surr.)	1	%	128	118	16	139
D5-N-EtFOSAA (surr.)	1	%	80	108	70	92
D3-N-MeFOSAA (surr.)	1	%	122	131	56	136
Perfluoroalkyl sulfonic acids (PFSAs)						
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	%	130	102	90	126
18O2-PFHxS (surr.)	1	%	121	104	107	145
13C8-PFOS (surr.)	1	%	120	136	71	118

Client Sample ID			SX_OB_20220518_12_31_SS_Primary_EUF	SX_IB_20220518_12_40_SS_Primary_EUF	SX_IB_20220518_15_46_SS_Primary_EUF	SX_IB_20220518_15_50_SS_Duplicate_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-My0045153	M22-My0045154	M22-My0045155	M22-My0045156
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 18, 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	%	110	97	80	104
13C2-6:2 FTSA (surr.)	1	%	139	114	115	165
13C2-8:2 FTSA (surr.)	1	%	82	116	42	91
13C2-10:2 FTSA (surr.)	1	%	134	127	54	135
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_20220519_00_54_SS_Primary_EUF	SX_IB_20220519_00_05_SS_Primary_EUF	SX_IB_20220519_04_05_SS_Primary_EUF	SX_OB_20220519_04_18_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-My0045157	M22-My0045158	M22-My0045159	M22-My0045160
Date Sampled			May 18, 2022	May 09, 2022	May 19, 2022	May 19, 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	6.2	6.2	6.2	6.2
pH (off)	0.1	pH Units	8.0	8.3	8.4	8.3
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	%	94	127	127	85
13C5-PFPeA (surr.)	1	%	93	82	109	91

Client Sample ID			SX_OB_20220 518_19_54_SS _Primary_EUF	SX_IB_202205 19_00_05_SS _Primary_EUF	SX_IB_202205 19_04_05_SS _Primary_EUF	SX_OB_20220 519_04_18_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- My0045157	M22- My0045158	M22- My0045159	M22- My0045160
Date Sampled			May 18, 2022	May 09, 2022	May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C5-PFHxA (surr.)	1	%	62	63	57	81
13C4-PFHpA (surr.)	1	%	94	129	131	91
13C8-PFOA (surr.)	1	%	96	147	145	87
13C5-PFNA (surr.)	1	%	92	126	121	89
13C6-PFDA (surr.)	1	%	88	138	134	92
13C2-PFUnDA (surr.)	1	%	86	150	137	89
13C2-PFDoDA (surr.)	1	%	102	145	134	95
13C2-PFTeDA (surr.)	1	%	96	136	117	91
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	%	102	152	140	100
D3-N-MeFOSA (surr.)	1	%	71	121	60	72
D5-N-EtFOSA (surr.)	1	%	69	124	53	70
D7-N-MeFOSE (surr.)	1	%	91	159	102	101
D9-N-EtFOSE (surr.)	1	%	106	158	123	108
D5-N-EtFOSAA (surr.)	1	%	82	107	101	72
D3-N-MeFOSAA (surr.)	1	%	103	169	142	104
Perfluoroalkyl sulfonic acids (PFSAs)						
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	%	97	126	135	99
18O2-PFHxS (surr.)	1	%	105	130	106	96
13C8-PFOS (surr.)	1	%	99	127	127	83
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

Client Sample ID			SX_OB_20220518_19_54_SS_Primary_EUF	SX_IB_20220519_00_05_SS_Primary_EUF	SX_IB_20220519_04_05_SS_Primary_EUF	SX_OB_20220519_04_18_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-My0045157	M22-My0045158	M22-My0045159	M22-My0045160
Date Sampled			May 18, 2022	May 09, 2022	May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
13C2-4:2 FTSA (surr.)	1	%	148	105	110	124
13C2-6:2 FTSA (surr.)	1	%	97	112	82	94
13C2-8:2 FTSA (surr.)	1	%	68	117	118	75
13C2-10:2 FTSA (surr.)	1	%	96	151	140	85
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 19, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	May 19, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	May 19, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 24, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 24, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 24, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 24, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 19, 2022	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 19, 2022 1:05 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	889872	Due:	May 26, 2022
Project Name:	20220519044707-Eurofin-21	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_IB_20220518_07_56_SS_Triplicate_EU_F	May 18, 2022	7:56AM	Soil	M22-My0045129		X	X	X
2	SX_IB_20220518_08_00_SS_Primary_EUF	May 18, 2022	8:00AM	Soil	M22-My0045130		X	X	X
3	SX_IB_20220518_08_29_SB_Blank_EUF	May 18, 2022	8:29AM	Water	M22-My0045131			X	
4	SX_IB_20220518_08_27_SR	May 18, 2022	8:27AM	Water	M22-My0045132			X	

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

Project Name: 20220519044707-Eurofin-21
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Fax:

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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									
	_Rinsate_EUF								
5	SX_OB_20220518_12_31_SS_Primary_EUF	May 18, 2022	12:31PM	Soil	M22-My0045133		X	X	X
6	SX_IB_20220518_12_40_SS_Primary_EUF	May 18, 2022	12:40PM	Soil	M22-My0045134		X	X	X
7	SX_IB_20220518_15_46_SS_Primary_EUF	May 18, 2022	3:46PM	Soil	M22-My0045135		X	X	X
8	SX_IB_20220518_15_50_SS_Duplicate_EUF	May 18, 2022	3:50PM	Soil	M22-My0045136		X	X	X

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Project Name:	20220519044707-Eurofin-21	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									
	_Duplicate_EU F								
9	SX_OB_20220518_19_54_S_S_Primary_EUF	May 18, 2022	7:54PM	Soil	M22-My0045137		X	X	X
10	SX_IB_20220519_00_05_SS_Primary_EUF	May 09, 2022	12:05AM	Soil	M22-My0045138		X	X	X
11	SX_IB_20220519_04_05_SS_Primary_EUF	May 19, 2022	4:05AM	Soil	M22-My0045139		X	X	X
12	SX_OB_20220519_04_18_S	May 19, 2022	4:18AM	Soil	M22-My0045140		X	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								
13	SX_IB_202205 18_07_56_SS _Triplicate_EU F	May 18, 2022	7:56AM	AUS Leachate - pH 5.0	M22- My0045141	X		X	
14	SX_IB_202205 18_08_00_SS _Primary_EUF	May 18, 2022	8:00AM	AUS Leachate - pH 5.0	M22- My0045142	X		X	
15	SX_OB_20220 518_12_31_S S_Primary_EU F	May 18, 2022	12:31PM	AUS Leachate - pH 5.0	M22- My0045143	X		X	
16	SX_IB_202205	May 18, 2022	12:40PM	AUS Leachate	M22-	X		X	

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Project Name:	20220519044707-Eurofin-21	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									
16	SX_IB_20220518_12_40_SS_Primary_EUF	May 18, 2022	12:40PM	AUS Leachate - pH 5.0	M22-My0045144				
17	SX_IB_20220518_15_46_SS_Primary_EUF	May 18, 2022	3:46PM	AUS Leachate - pH 5.0	M22-My0045145	X		X	
18	SX_IB_20220518_15_50_SS_Duplicate_EUF	May 18, 2022	3:50PM	AUS Leachate - pH 5.0	M22-My0045146	X		X	
19	SX_OB_20220518_19_54_S_S_Primary_EUF	May 18, 2022	7:54PM	AUS Leachate - pH 5.0	M22-My0045147	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									
20	SX_IB_20220519_00_05_SS_Primary_EUF	May 09, 2022	12:05AM	AUS Leachate - pH 5.0	M22-My0045148	X		X	
21	SX_IB_20220519_04_05_SS_Primary_EUF	May 19, 2022	4:05AM	AUS Leachate - pH 5.0	M22-My0045149	X		X	
22	SX_OB_20220519_04_18_SS_Primary_EUF	May 19, 2022	4:18AM	AUS Leachate - pH 5.0	M22-My0045150	X		X	
23	SX_IB_20220518_07_56_SS_Triplicate_EUF	May 18, 2022	7:56AM	AUS Leachate - Reagent Water	M22-My0045151	X		X	

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Project Name:	20220519044707-Eurofin-21	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									
24	SX_IB_20220518_08_00_SS_Primary_EUF	May 18, 2022	8:00AM	AUS Leachate - Reagent Water	M22-My0045152	X		X	
25	SX_OB_20220518_12_31_S_Primary_EUF	May 18, 2022	12:31PM	AUS Leachate - Reagent Water	M22-My0045153	X		X	
26	SX_IB_20220518_12_40_SS_Primary_EUF	May 18, 2022	12:40PM	AUS Leachate - Reagent Water	M22-My0045154	X		X	
27	SX_IB_20220518_15_46_SS_Primary_EUF	May 18, 2022	3:46PM	AUS Leachate - Reagent Water	M22-My0045155	X		X	
28	SX_IB_202205	May 18, 2022	3:50PM	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									
	18_15_50_SS _Duplicate_EU F			- Reagent Water	My0045156				
29	SX_OB_20220 518_19_54_S S_Primary_EU F	May 18, 2022	7:54PM	AUS Leachate - Reagent Water	M22- My0045157	X		X	
30	SX_IB_202205 19_00_05_SS _Primary_EUF	May 09, 2022	12:05AM	AUS Leachate - Reagent Water	M22- My0045158	X		X	
31	SX_IB_202205 19_04_05_SS _Primary_EUF	May 19, 2022	4:05AM	AUS Leachate - Reagent Water	M22- My0045159	X		X	
32	SX_OB_20220	May 19, 2022	4:18AM	AUS Leachate	M22-	X		X	

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Project Name:	20220519044707-Eurofin-21	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									
32	SX_OB_20220519_04_18_SS_Primary_EUF	May 19, 2022	4:18AM	AUS Leachate - Reagent Water	M22-My0045160				
Test Counts						20	10	32	10

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)	%	99		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	73		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	78		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	69		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	64		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	74		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	83		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	78		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	97		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	117		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	85		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
LCS - % Recovery								
Perfluoroalkyl sulfonamido substances								
Perfluorooctane sulfonamide (FOSA)	%	84			50-150	Pass		
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	97			50-150	Pass		
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	138			50-150	Pass		
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	110			50-150	Pass		
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	128			50-150	Pass		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	78			50-150	Pass		
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	64			50-150	Pass		
LCS - % Recovery								
Perfluoroalkyl sulfonic acids (PFSA)								
Perfluorobutanesulfonic acid (PFBS)	%	58			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	75			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	77			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	83			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	78			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	78			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	86			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	93			50-150	Pass		
LCS - % Recovery								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	84			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	91			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	148			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	66			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-My0045142	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonamido substances								
				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-My0045142	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0045142	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0045142	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0045142	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0045142	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-My0045142	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0045142	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0045142	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0045142	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-My0045151	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-My0045151	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0045151	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0045151	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0045151	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0045151	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-My0045151	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0045151	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0045151	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0045151	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCA)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-My0045153	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotridecanoic acid (PFTTrDA)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-My0045153	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0045153	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0045153	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0045153	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0045153	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-My0045153	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0045153	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0045153	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0045153	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass

Comments
Sample Integrity

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

Qualifier Codes/Comments

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

Authorised by:

Michael Cassidy	Analytical Services Manager
Joseph Edouard	Senior Analyst-PFAS
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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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 **889872-S**
Project name **20220519044707-Eurofin-21**
Project ID **JC0927**
Received Date **May 19, 2022**

Client Sample ID			SX_IB_202205 18_07_56_SS TriPLICATE_EUF	SX_IB_202205 18_08_00_SS Primary_EUF	SX_OB_20220 518_12_31_SS _Primary_EUF	SX_IB_202205 18_12_40_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0045129	M22- My0045130	M22- My0045133	M22- My0045134
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 18, 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	38	< 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_IB_202205 18_07_56_SS Triplicate_EUF	SX_IB_202205 18_08_00_SS Primary_EUF	SX_OB_20220 518_12_31_SS _Primary_EUF	SX_IB_202205 18_12_40_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0045129	M22- My0045130	M22- My0045133	M22- My0045134
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 18, 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	%	111	105	125	111
Toluene-d8 (surr.)	1	%	117	113	116	108
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

Client Sample ID			SX_IB_202205 18_07_56_SS TriPLICATE_EUF	SX_IB_202205 18_08_00_SS Primary_EUF	SX_OB_20220 518_12_31_SS _Primary_EUF	SX_IB_202205 18_12_40_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0045129	M22- My0045130	M22- My0045133	M22- My0045134
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 18, 2022
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	58	113	71	121
p-Terphenyl-d14 (surr.)	1	%	97	97	86	118
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	%	112	112	50	120
Tetrachloro-m-xylene (surr.)	1	%	109	105	82	121

Client Sample ID			SX_IB_202205 18_07_56_SS TriPLICATE_EUF	SX_IB_202205 18_08_00_SS Primary_EUF	SX_OB_20220 518_12_31_SS _Primary_EUF	SX_IB_202205 18_12_40_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0045129	M22- My0045130	M22- My0045133	M22- My0045134
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 18, 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	%	112	112	50	120
Tetrachloro-m-xylene (surr.)	1	%	109	105	82	121
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	%	Q ⁰⁹ int	82	92	73
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	< 100	< 100	130	< 100
pH (1:5 Aqueous extract at 25°C as rec.)						
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.0	8.4	8.1	8.4
% Moisture						
% Moisture	1	%	24	29	30	25
Heavy Metals						
Arsenic	2	mg/kg	24	32	42	36
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	120	140	150	130
Copper	5	mg/kg	63	65	89	63
Lead	5	mg/kg	< 5	< 5	6.6	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_IB_202205 18_07_56_SS TriPLICATE_EUF	SX_IB_202205 18_08_00_SS Primary_EUF	SX_OB_20220 518_12_31_SS _Primary_EUF	SX_IB_202205 18_12_40_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0045129	M22- My0045130	M22- My0045133	M22- My0045134
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 18, 2022
Test/Reference	LOR	Unit				
Heavy Metals						
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	210	210	240	210
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	110	130	160	110
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	%	77	74	99	76
13C5-PFPeA (surr.)	1	%	74	99	77	101
13C5-PFHxA (surr.)	1	%	77	79	93	74
13C4-PFHpA (surr.)	1	%	84	78	93	84
13C8-PFOA (surr.)	1	%	74	83	105	89
13C5-PFNA (surr.)	1	%	85	82	88	83
13C6-PFDA (surr.)	1	%	105	97	123	100
13C2-PFUnDA (surr.)	1	%	98	89	92	81
13C2-PFDoDA (surr.)	1	%	91	89	93	98
13C2-PFTeDA (surr.)	1	%	85	110	101	93
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	96	111	101
D3-N-MeFOSA (surr.)	1	%	113	111	108	103
D5-N-EtFOSA (surr.)	1	%	89	86	98	89
D7-N-MeFOSE (surr.)	1	%	93	105	154	111
D9-N-EtFOSE (surr.)	1	%	85	93	84	93
D5-N-EtFOSAA (surr.)	1	%	115	141	71	86
D3-N-MeFOSAA (surr.)	1	%	103	100	110	124

Client Sample ID			SX_IB_202205 18_07_56_SS TriPLICATE_EUF	SX_IB_202205 18_08_00_SS Primary_EUF	SX_OB_20220 518_12_31_SS _Primary_EUF	SX_IB_202205 18_12_40_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0045129	M22- My0045130	M22- My0045133	M22- My0045134
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 18, 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	%	76	90	101	82
18O2-PFHxS (surr.)	1	%	111	70	112	118
13C8-PFOS (surr.)	1	%	69	80	130	82
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	%	89	84	90	104
13C2-6:2 FTSA (surr.)	1	%	136	141	98	120
13C2-8:2 FTSA (surr.)	1	%	114	118	97	116
13C2-10:2 FTSA (surr.)	1	%	87	166	97	134
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_IB_202205 18_15_46_SS Primary_EUF	SX_IB_202205 18_15_50_SS Duplicate_EUF	SX_OB_20220 518_19_54_SS _Primary_EUF	SX_IB_202205 19_00_05_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0045135	M22- My0045136	M22- My0045137	M22- My0045138
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 09, 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	37
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

Client Sample ID			SX_IB_202205 18_15_46_SS_ Primary_EUF	SX_IB_202205 18_15_50_SS_ Duplicate_EUF	SX_OB_20220 518_19_54_SS_ Primary_EUF	SX_IB_202205 19_00_05_SS_ Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0045135	M22- My0045136	M22- My0045137	M22- My0045138
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 09, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
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
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

Client Sample ID			SX_IB_202205 18_15_46_SS Primary_EUF	SX_IB_202205 18_15_50_SS Duplicate_EUF	SX_IB_202205 19_00_05_SS Primary_EUF	SX_IB_202205 19_00_05_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0045135	M22- My0045136	M22- My0045137	M22- My0045138
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 09, 2022
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	95	91	88	128
Toluene-d8 (surr.)	1	%	101	89	85	118
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	%	76	104	101	73
p-Terphenyl-d14 (surr.)	1	%	78	118	101	86
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

Client Sample ID			SX_IB_202205 18_15_46_SS Primary_EUF	SX_IB_202205 18_15_50_SS Duplicate_EUF	SX_OB_20220 518_19_54_SS _Primary_EUF	SX_IB_202205 19_00_05_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0045135	M22- My0045136	M22- My0045137	M22- My0045138
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 09, 2022
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
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	%	107	150	108	53
Tetrachloro-m-xylene (surr.)	1	%	110	103	138	80
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	%	107	150	108	53
Tetrachloro-m-xylene (surr.)	1	%	110	103	138	80
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

Client Sample ID			SX_IB_202205 18_15_46_SS_ Primary_EUF	SX_IB_202205 18_15_50_SS_ Duplicate_EUF	SX_IB_202205 19_05_54_SS_ Primary_EUF	SX_IB_202205 19_00_05_SS_ Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0045135	M22- My0045136	M22- My0045137	M22- My0045138
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 09, 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	%	82	54	146	87
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	110	180	< 100	140
pH (1:5 Aqueous extract at 25°C as rec.)						
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.7	8.9	7.9	10
% Moisture						
% Moisture	1	%	26	27	27	29
Heavy Metals						
Arsenic	2	mg/kg	34	43	48	43
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	140	140	89	170
Copper	5	mg/kg	67	74	53	100
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	220	220	140	260
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	120	130	93	160
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	%	74	75	72	70
13C5-PFPeA (surr.)	1	%	59	90	70	108
13C5-PFHxA (surr.)	1	%	75	80	73	75

Client Sample ID			SX_IB_202205 18_15_46_SS_ Primary_EUF	SX_IB_202205 18_15_50_SS_ Duplicate_EUF	SX_IB_202205 19_00_05_SS_ Primary_EUF	SX_IB_202205 19_00_05_SS_ Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0045135	M22- My0045136	M22- My0045137	M22- My0045138
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 09, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	83	89	73	81
13C8-PFOA (surr.)	1	%	84	80	80	69
13C5-PFNA (surr.)	1	%	94	85	82	88
13C6-PFDA (surr.)	1	%	63	113	81	91
13C2-PFUnDA (surr.)	1	%	82	90	97	87
13C2-PFDoDA (surr.)	1	%	96	106	85	78
13C2-PFTeDA (surr.)	1	%	95	142	141	90
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	%	104	104	88	100
D3-N-MeFOSA (surr.)	1	%	111	107	118	107
D5-N-EtFOSA (surr.)	1	%	103	101	93	94
D7-N-MeFOSE (surr.)	1	%	115	98	88	90
D9-N-EtFOSE (surr.)	1	%	97	100	90	91
D5-N-EtFOSAA (surr.)	1	%	93	120	112	96
D3-N-MeFOSAA (surr.)	1	%	113	90	126	100
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	%	91	84	92	96
18O2-PFHxS (surr.)	1	%	106	94	106	123
13C8-PFOS (surr.)	1	%	72	85	61	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	%	74	97	88	89
13C2-6:2 FTSA (surr.)	1	%	112	121	98	131

Client Sample ID			SX_IB_202205 18_15_46_SS_ Primary_EUF	SX_IB_202205 18_15_50_SS_ Duplicate_EUF	SX_OB_20220 518_19_54_SS_ _Primary_EUF	SX_IB_202205 19_00_05_SS_ Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0045135	M22- My0045136	M22- My0045137	M22- My0045138
Date Sampled			May 18, 2022	May 18, 2022	May 18, 2022	May 09, 2022
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
13C2-8:2 FTSA (surr.)	1	%	104	109	111	95
13C2-10:2 FTSA (surr.)	1	%	109	70	119	125
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_IB_202205 19_04_05_SS_ Primary_EUF	SX_OB_20220 519_04_18_SS_ _Primary_EUF
Sample Matrix			Soil	Soil
Eurofins Sample No.			M22- My0045139	M22- My0045140
Date Sampled			May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100
Volatile Organics				
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5
Volatile Organics				
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			SX_IB_202205 19_04_05_SS Primary_EUF	SX_OB_20220 519_04_18_SS _Primary_EUF
Sample Matrix			Soil	Soil
Eurofins Sample No.			M22- My0045139	M22- My0045140
Date Sampled			May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit		
Volatile Organics				
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	70	82
Toluene-d8 (surr.)	1	%	63	82

Client Sample ID			SX_IB_202205 19_04_05_SS Primary_EUF	SX_OB_20220 519_04_18_SS _Primary_EUF
Sample Matrix			Soil	Soil
Eurofins Sample No.			M22- My0045139	M22- My0045140
Date Sampled			May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	64	72
p-Terphenyl-d14 (surr.)	1	%	82	84
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1

Client Sample ID			SX_IB_202205 19_04_05_SS_	SX_OB_20220 519_04_18_SS
Sample Matrix			Primary_EUF	Primary_EUF
Eurofins Sample No.			Soil	Soil
Date Sampled			M22- My0045139	M22- My0045140
Test/Reference	LOR	Unit	May 19, 2022	May 19, 2022
Organochlorine Pesticides				
Dibutylchlorendate (surr.)	1	%	62	53
Tetrachloro-m-xylene (surr.)	1	%	78	88
Polychlorinated Biphenyls				
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	62	53
Tetrachloro-m-xylene (surr.)	1	%	78	88
Phenols (Halogenated)				
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1
Phenols (non-Halogenated)				
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5
2-Nitrophenol	1.0	mg/kg	< 1	< 1
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	84	93
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20
Chromium (hexavalent)				
Chromium (hexavalent)	1	mg/kg	< 1	< 1
Cyanide (total)	5	mg/kg	< 5	< 5
Fluoride (Total)	100	mg/kg	< 100	< 100
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.7	8.7
% Moisture	1	%	26	30

Client Sample ID			SX_IB_202205 19_04_05_SS Primary_EUF	SX_OB_20220 519_04_18_SS _Primary_EUF
Sample Matrix			Soil	Soil
Eurofins Sample No.			M22- My0045139	M22- My0045140
Date Sampled			May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit		
Heavy Metals				
Arsenic	2	mg/kg	22	200
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	130	170
Copper	5	mg/kg	62	110
Lead	5	mg/kg	< 5	7.4
Mercury	0.1	mg/kg	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5
Nickel	5	mg/kg	210	270
Selenium	2	mg/kg	< 2	< 2
Silver	2	mg/kg	< 2	< 2
Tin	10	mg/kg	< 10	< 10
Zinc	5	mg/kg	110	200
Perfluoroalkyl carboxylic acids (PFCAs)				
Perfluorobutanoic acid (PFBA) ^{N11}	5	ug/kg	< 5	< 5
Perfluoropentanoic acid (PFPeA) ^{N11}	5	ug/kg	< 5	< 5
Perfluorohexanoic acid (PFHxA) ^{N11}	5	ug/kg	< 5	< 5
Perfluoroheptanoic acid (PFHpA) ^{N11}	5	ug/kg	< 5	< 5
Perfluorooctanoic acid (PFOA) ^{N11}	5	ug/kg	< 5	< 5
Perfluorononanoic acid (PFNA) ^{N11}	5	ug/kg	< 5	< 5
Perfluorodecanoic acid (PFDA) ^{N11}	5	ug/kg	< 5	< 5
Perfluoroundecanoic acid (PFUnDA) ^{N11}	5	ug/kg	< 5	< 5
Perfluorododecanoic acid (PFDoDA) ^{N11}	5	ug/kg	< 5	< 5
Perfluorotridecanoic acid (PFTeDA) ^{N15}	5	ug/kg	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	5	ug/kg	< 5	< 5
13C4-PFBA (surr.)	1	%	58	86
13C5-PFPeA (surr.)	1	%	122	107
13C5-PFHxA (surr.)	1	%	69	85
13C4-PFHpA (surr.)	1	%	62	93
13C8-PFOA (surr.)	1	%	64	97
13C5-PFNA (surr.)	1	%	67	64
13C6-PFDA (surr.)	1	%	58	106
13C2-PFUnDA (surr.)	1	%	64	71
13C2-PFDoDA (surr.)	1	%	71	71
13C2-PFTeDA (surr.)	1	%	56	86
Perfluoroalkyl sulfonamido substances				
Perfluorooctane sulfonamide (FOSA) ^{N11}	5	ug/kg	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	5	ug/kg	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	5	ug/kg	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	5	ug/kg	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	5	ug/kg	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	10	ug/kg	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	10	ug/kg	< 10	< 10
13C8-FOSA (surr.)	1	%	75	92
D3-N-MeFOSA (surr.)	1	%	79	82

Client Sample ID			SX_IB_202205 19_04_05_SS_ Primary_EUF	SX_OB_20220 519_04_18_SS _Primary_EUF
Sample Matrix			Soil	Soil
Eurofins Sample No.			M22- My0045139	M22- My0045140
Date Sampled			May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit		
Perfluoroalkyl sulfonamido substances				
D5-N-EtFOSA (surr.)	1	%	72	85
D7-N-MeFOSE (surr.)	1	%	59	90
D9-N-EtFOSE (surr.)	1	%	68	84
D5-N-EtFOSAA (surr.)	1	%	95	82
D3-N-MeFOSAA (surr.)	1	%	105	84
Perfluoroalkyl sulfonic acids (PFASs)				
Perfluorobutanesulfonic acid (PFBS) ^{N11}	5	ug/kg	< 5	< 5
Perfluorononanesulfonic acid (PFNS) ^{N15}	5	ug/kg	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	5	ug/kg	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	5	ug/kg	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	5	ug/kg	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	5	ug/kg	< 5	< 5
Perfluorooctanesulfonic acid (PFOS) ^{N11}	5	ug/kg	< 5	< 5
Perfluorodecanesulfonic acid (PFDS) ^{N15}	5	ug/kg	< 5	< 5
13C3-PFBS (surr.)	1	%	75	91
18O2-PFHxS (surr.)	1	%	75	112
13C8-PFOS (surr.)	1	%	93	106
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	10	ug/kg	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	5	ug/kg	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	61	73
13C2-6:2 FTSA (surr.)	1	%	61	98
13C2-8:2 FTSA (surr.)	1	%	90	71
13C2-10:2 FTSA (surr.)	1	%	86	106
PFASs Summations				
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 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 19, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 19, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 19, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	May 19, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	May 19, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 19, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	May 19, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	May 19, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 19, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 19, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	May 19, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	May 20, 2022	14 Days
Fluoride (Total) - Method: LTM-INO-4150 Determination of Total Fluoride PART B – ISE	Melbourne	May 20, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	May 19, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	May 19, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	May 19, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 25, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 25, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 25, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 25, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 19, 2022	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 19, 2022 1:05 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	889872	Due:	May 26, 2022
Project Name:	20220519044707-Eurofin-21	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_IB_20220518_07_56_SS_Triplicate_EU_F	May 18, 2022	7:56AM	Soil	M22-My0045129		X	X	X
2	SX_IB_20220518_08_00_SS_Primary_EUF	May 18, 2022	8:00AM	Soil	M22-My0045130		X	X	X
3	SX_IB_20220518_08_29_SB_Blank_EUF	May 18, 2022	8:29AM	Water	M22-My0045131			X	
4	SX_IB_20220518_08_27_SR	May 18, 2022	8:27AM	Water	M22-My0045132			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									
	_Rinsate_EUF								
5	SX_OB_20220518_12_31_SS_Primary_EUF	May 18, 2022	12:31PM	Soil	M22-My0045133		X	X	X
6	SX_IB_20220518_12_40_SS_Primary_EUF	May 18, 2022	12:40PM	Soil	M22-My0045134		X	X	X
7	SX_IB_20220518_15_46_SS_Primary_EUF	May 18, 2022	3:46PM	Soil	M22-My0045135		X	X	X
8	SX_IB_20220518_15_50_SS_Duplicate_EUF	May 18, 2022	3:50PM	Soil	M22-My0045136		X	X	X

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Project Name:	20220519044707-Eurofin-21	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									
	_Duplicate_EU F								
9	SX_OB_20220518_19_54_S_S_Primary_EUF	May 18, 2022	7:54PM	Soil	M22-My0045137		X	X	X
10	SX_IB_20220519_00_05_SS_Primary_EUF	May 09, 2022	12:05AM	Soil	M22-My0045138		X	X	X
11	SX_IB_20220519_04_05_SS_Primary_EUF	May 19, 2022	4:05AM	Soil	M22-My0045139		X	X	X
12	SX_OB_20220519_04_18_S	May 19, 2022	4:18AM	Soil	M22-My0045140		X	X	X

Company Name: Agon Environmental Pty Ltd - VIC
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063
Project Name: 20220519044707-Eurofin-21
Project ID: JC0927

Order No.:
Report #: 889872
Phone: 08 8338 1009
Fax:

Received: May 19, 2022 1:05 PM
Due: May 26, 2022
Priority: 5 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	S_Primary_EU F								
13	SX_IB_202205 18_07_56_SS _Triplicate_EU F	May 18, 2022	7:56AM	AUS Leachate - pH 5.0	M22- My0045141	X		X	
14	SX_IB_202205 18_08_00_SS _Primary_EUF	May 18, 2022	8:00AM	AUS Leachate - pH 5.0	M22- My0045142	X		X	
15	SX_OB_20220 518_12_31_S S_Primary_EU F	May 18, 2022	12:31PM	AUS Leachate - pH 5.0	M22- My0045143	X		X	
16	SX_IB_202205	May 18, 2022	12:40PM	AUS Leachate	M22-	X		X	

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Project Name:	20220519044707-Eurofin-21	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									
16	SX_IB_20220518_12_40_SS_Primary_EUF	May 18, 2022	12:40PM	AUS Leachate - pH 5.0	M22-My0045144				
17	SX_IB_20220518_15_46_SS_Primary_EUF	May 18, 2022	3:46PM	AUS Leachate - pH 5.0	M22-My0045145	X		X	
18	SX_IB_20220518_15_50_SS_Duplicate_EUF	May 18, 2022	3:50PM	AUS Leachate - pH 5.0	M22-My0045146	X		X	
19	SX_OB_20220518_19_54_S_S_Primary_EUF	May 18, 2022	7:54PM	AUS Leachate - pH 5.0	M22-My0045147	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									
20	SX_IB_20220519_00_05_SS_Primary_EUF	May 09, 2022	12:05AM	AUS Leachate - pH 5.0	M22-My0045148	X		X	
21	SX_IB_20220519_04_05_SS_Primary_EUF	May 19, 2022	4:05AM	AUS Leachate - pH 5.0	M22-My0045149	X		X	
22	SX_OB_20220519_04_18_SS_Primary_EUF	May 19, 2022	4:18AM	AUS Leachate - pH 5.0	M22-My0045150	X		X	
23	SX_IB_20220518_07_56_SS_Triplicate_EUF	May 18, 2022	7:56AM	AUS Leachate - Reagent Water	M22-My0045151	X		X	

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Project Name:	20220519044707-Eurofin-21	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									
24	SX_IB_20220518_08_00_SS_Primary_EUF	May 18, 2022	8:00AM	AUS Leachate - Reagent Water	M22-My0045152	X		X	
25	SX_OB_20220518_12_31_S_Primary_EUF	May 18, 2022	12:31PM	AUS Leachate - Reagent Water	M22-My0045153	X		X	
26	SX_IB_20220518_12_40_SS_Primary_EUF	May 18, 2022	12:40PM	AUS Leachate - Reagent Water	M22-My0045154	X		X	
27	SX_IB_20220518_15_46_SS_Primary_EUF	May 18, 2022	3:46PM	AUS Leachate - Reagent Water	M22-My0045155	X		X	
28	SX_IB_202205	May 18, 2022	3:50PM	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									
	18_15_50_SS_Duplicate_EU_F			- Reagent Water	My0045156				
29	SX_OB_20220518_19_54_S_S_Primary_EU_F	May 18, 2022	7:54PM	AUS Leachate - Reagent Water	M22-My0045157	X		X	
30	SX_IB_20220519_00_05_SS_Primary_EUF	May 09, 2022	12:05AM	AUS Leachate - Reagent Water	M22-My0045158	X		X	
31	SX_IB_20220519_04_05_SS_Primary_EUF	May 19, 2022	4:05AM	AUS Leachate - Reagent Water	M22-My0045159	X		X	
32	SX_OB_20220519_04_05_SS_Primary_EUF	May 19, 2022	4:18AM	AUS Leachate	M22-	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									
32	SX_OB_20220519_04_18_SS_Primary_EUF	May 19, 2022	4:18AM	AUS Leachate - Reagent Water	M22-My0045160				
Test Counts						20	10	32	10

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 C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	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							
Chromium (hexavalent)	mg/kg	< 1			1	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	
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 (PFTTrDA)	ug/kg	< 5			5	Pass	
Perfluorotetradecanoic acid (PFTTeDA)	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 (PFSA)							
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5			5	Pass	
Perfluoronanesulfonic acid (PFNS)	ug/kg	< 5			5	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
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 C10-C14	%	104		70-130	Pass	
TRH >C10-C16	%	107		70-130	Pass	
LCS - % Recovery						
Chromium (hexavalent)	%	79		70-130	Pass	
Fluoride (Total)	%	108		70-130	Pass	
LCS - % Recovery						
Heavy Metals						
Arsenic	%	95		80-120	Pass	
Cadmium	%	102		80-120	Pass	
Chromium	%	97		80-120	Pass	
Copper	%	93		80-120	Pass	
Lead	%	95		80-120	Pass	
Mercury	%	104		80-120	Pass	
Molybdenum	%	95		80-120	Pass	
Nickel	%	95		80-120	Pass	
Selenium	%	95		80-120	Pass	
Silver	%	98		80-120	Pass	
Tin	%	96		80-120	Pass	
Zinc	%	96		80-120	Pass	
LCS - % Recovery						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	%	93		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	76		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	89		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	99		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	101		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	92		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	97		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	104		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	118		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	87		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	111		50-150	Pass	
LCS - % Recovery						
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)	%	89		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	89		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	105		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	108		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	93		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	94		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	94			50-150	Pass		
LCS - % Recovery								
Perfluoroalkyl sulfonic acids (PFASs)								
Perfluorobutanesulfonic acid (PFBS)	%	108			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	147			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	112			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	116			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	90			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	106			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	102			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	88			50-150	Pass		
LCS - % Recovery								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	114			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	118			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	141			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	88			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-My0045129	CP	%	98		70-130	Pass	
TRH >C10-C16	M22-My0045129	CP	%	100		70-130	Pass	
Spike - % Recovery								
				Result 1				
Fluoride (Total)	M22-My0045133	CP	%	91		70-130	Pass	
Spike - % Recovery								
				Result 1				
Fluoride (Total)	M22-My0045134	CP	%	144		70-130	Fail	Q08
Spike - % Recovery								
				Result 1				
Heavy Metals								
Arsenic	M22-My0045136	CP	%	101		75-125	Pass	
Cadmium	M22-My0045136	CP	%	121		75-125	Pass	
Chromium	M22-My0045136	CP	%	108		75-125	Pass	
Copper	M22-My0045136	CP	%	110		75-125	Pass	
Lead	M22-My0045136	CP	%	118		75-125	Pass	
Molybdenum	M22-My0045136	CP	%	110		75-125	Pass	
Nickel	M22-My0045136	CP	%	104		75-125	Pass	
Selenium	M22-My0045136	CP	%	104		75-125	Pass	
Silver	M22-My0045136	CP	%	112		75-125	Pass	
Tin	M22-My0045136	CP	%	121		75-125	Pass	
Zinc	M22-My0045136	CP	%	128		75-125	Fail	Q08
Spike - % Recovery								
				Result 1				
Fluoride (Total)	M22-My0045138	CP	%	83		70-130	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 C6-C9	M22-My0038868	NCP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C10-C14	M22-My0045129	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M22-My0045129	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M22-My0045129	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	M22-My0045129	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M22-My0045129	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M22-My0045129	CP	mg/kg	< 100	< 100	<1	30%	Pass

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Hexachlorobutadiene	M22-My0038868	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1,2,4-Trichlorobenzene	M22-My0038868	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&i)fluoranthene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M22-My0041628	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M22-My0045129	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M22-My0041628	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M22-My0045129	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M22-My0045129	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M22-My0045129	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M22-My0041628	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M22-My0045129	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M22-My0045129	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M22-My0041628	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M22-My0041628	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M22-My0041628	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M22-My0041628	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M22-My0045129	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-My0041628	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-My0045129	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-My0041628	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M22-My0045129	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M22-My0041628	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-My0041628	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-My0041628	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M22-My0045129	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-My0045129	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-My0045129	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-My0045129	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-My0045129	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-My0045129	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-My0045129	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-My0045129	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass

Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	M22-My0045129	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M22-My0045129	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M22-My0045129	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M22-My0045129	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	M22-My0045129	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-My0045129	CP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-My0045129	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-My0045129	CP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	M22-My0045129	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M22-My0045129	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-My0045129	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M22-My0045129	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	M22-My0045129	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-My0045129	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-My0045129	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M22-My0045129	CP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-My0045129	CP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-My0045129	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-My0045567	NCP	mg/kg	< 1	< 1	<1	30%	Pass
pH (1:5 Aqueous extract at 25°C as rec.)	M22-My0045129	CP	pH Units	8.0	8.1	pass	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Fluoride (Total)	M22-My0045130	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	M22-My0045135	CP	%	26	29	9.0	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M22-My0045136	CP	mg/kg	43	43	<1	30%	Pass
Cadmium	M22-My0045136	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M22-My0045136	CP	mg/kg	140	140	1.0	30%	Pass
Copper	M22-My0045136	CP	mg/kg	74	76	2.0	30%	Pass
Lead	M22-My0045136	CP	mg/kg	< 5	< 5	<1	30%	Pass
Mercury	M22-My0045136	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M22-My0045136	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M22-My0045136	CP	mg/kg	220	230	3.0	30%	Pass
Selenium	M22-My0045136	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M22-My0045136	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-My0045136	CP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M22-My0045136	CP	mg/kg	130	130	2.0	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Cyanide (total)	M22-My0045139	CP	mg/kg	< 5	< 5	<1	30%	Pass

Comments
Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q09	The Surrogate recovery is outside of the recommended acceptance criteria due to matrix interference. Acceptance criteria were met for all other QC

Authorised by:

Michael Cassidy	Analytical Services Manager
Caitlin Breeze	Senior Analyst-Inorganic
Carroll Lee	Senior Analyst-Volatile
Edward Lee	Senior Analyst-Organic
Joseph Edouard	Senior Analyst-PFAS
Mary Makarios	Senior Analyst-Metal
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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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 **889872-W**
Project name **20220519044707-Eurofin-21**
Project ID **JC0927**
Received Date **May 19, 2022**

Client Sample ID			SX_IB_202205 18_08_29_SB_Blank_EUF	SX_IB_202205 18_08_27_SR_Rinsate_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22-My0045131	M22-My0045132
Date Sampled			May 18, 2022	May 18, 2022
Test/Reference	LOR	Unit		
Perfluoroalkyl carboxylic acids (PFCAs)				
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTTrDA) ^{N15}	0.01	ug/L	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	117	114
13C5-PFPeA (surr.)	1	%	83	78
13C5-PFHxA (surr.)	1	%	115	110
13C4-PFHpA (surr.)	1	%	119	114
13C8-PFOA (surr.)	1	%	120	117
13C5-PFNA (surr.)	1	%	88	89
13C6-PFDA (surr.)	1	%	96	101
13C2-PFUnDA (surr.)	1	%	84	86
13C2-PFDoDA (surr.)	1	%	90	88
13C2-PFTeDA (surr.)	1	%	90	69
Perfluoroalkyl sulfonamido substances				
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	111	98

Client Sample ID			SX_IB_202205 18_08_29_SB_Blank_EUF	SX_IB_202205 18_08_27_SR_Rinsate_EUF
Sample Matrix			Water	Water
Eurofins Sample No.			M22-My0045131	M22-My0045132
Date Sampled			May 18, 2022	May 18, 2022
Test/Reference	LOR	Unit		
Perfluoroalkyl sulfonamido substances				
D3-N-MeFOSA (surr.)	1	%	87	33
D5-N-EtFOSA (surr.)	1	%	83	27
D7-N-MeFOSE (surr.)	1	%	77	99
D9-N-EtFOSE (surr.)	1	%	104	82
D5-N-EtFOSAA (surr.)	1	%	99	91
D3-N-MeFOSAA (surr.)	1	%	99	100
Perfluoroalkyl sulfonic acids (PFASs)				
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS) ^{N15}	0.01	ug/L	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	0.01	ug/L	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	102	101
18O2-PFHxS (surr.)	1	%	88	94
13C8-PFOS (surr.)	1	%	97	93
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
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	59	60
13C2-6:2 FTSA (surr.)	1	%	52	55
13C2-8:2 FTSA (surr.)	1	%	58	75
13C2-10:2 FTSA (surr.)	1	%	73	86
PFASs Summations				
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Melbourne	May 19, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	May 19, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	May 19, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	May 19, 2022	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	May 19, 2022	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 19, 2022 1:05 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	889872	Due:	May 26, 2022
Project Name:	20220519044707-Eurofin-21	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_IB_20220518_07_56_SS_Triplicate_EU_F	May 18, 2022	7:56AM	Soil	M22-My0045129		X	X	X
2	SX_IB_20220518_08_00_SS_Primary_EUF	May 18, 2022	8:00AM	Soil	M22-My0045130		X	X	X
3	SX_IB_20220518_08_29_SB_Blank_EUF	May 18, 2022	8:29AM	Water	M22-My0045131			X	
4	SX_IB_20220518_08_27_SR	May 18, 2022	8:27AM	Water	M22-My0045132			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									
	_Rinsate_EUF								
5	SX_OB_20220518_12_31_SS_Primary_EUF	May 18, 2022	12:31PM	Soil	M22-My0045133		X	X	X
6	SX_IB_20220518_12_40_SS_Primary_EUF	May 18, 2022	12:40PM	Soil	M22-My0045134		X	X	X
7	SX_IB_20220518_15_46_SS_Primary_EUF	May 18, 2022	3:46PM	Soil	M22-My0045135		X	X	X
8	SX_IB_20220518_15_50_SS_Duplicate_EUF	May 18, 2022	3:50PM	Soil	M22-My0045136		X	X	X

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

Project Name: 20220519044707-Eurofin-21
Project ID: JC0927

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Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
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									
	_Duplicate_EU F								
9	SX_OB_20220518_19_54_S_S_Primary_EUF	May 18, 2022	7:54PM	Soil	M22-My0045137		X	X	X
10	SX_IB_20220519_00_05_SS_Primary_EUF	May 09, 2022	12:05AM	Soil	M22-My0045138		X	X	X
11	SX_IB_20220519_04_05_SS_Primary_EUF	May 19, 2022	4:05AM	Soil	M22-My0045139		X	X	X
12	SX_OB_20220519_04_18_S	May 19, 2022	4:18AM	Soil	M22-My0045140		X	X	X

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Project Name:	20220519044707-Eurofin-21	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									
	S_Primary_EU F								
13	SX_IB_202205 18_07_56_SS _Triplicate_EU F	May 18, 2022	7:56AM	AUS Leachate - pH 5.0	M22- My0045141	X		X	
14	SX_IB_202205 18_08_00_SS _Primary_EUF	May 18, 2022	8:00AM	AUS Leachate - pH 5.0	M22- My0045142	X		X	
15	SX_OB_20220 518_12_31_S S_Primary_EU F	May 18, 2022	12:31PM	AUS Leachate - pH 5.0	M22- My0045143	X		X	
16	SX_IB_202205	May 18, 2022	12:40PM	AUS Leachate	M22-	X		X	

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Project Name:	20220519044707-Eurofin-21	Phone:	08 8338 1009	Priority:	5 Day
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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
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									
16	SX_IB_20220518_12_40_SS_Primary_EUF	May 18, 2022	12:40PM	AUS Leachate - pH 5.0	M22-My0045144				
17	SX_IB_20220518_15_46_SS_Primary_EUF	May 18, 2022	3:46PM	AUS Leachate - pH 5.0	M22-My0045145	X		X	
18	SX_IB_20220518_15_50_SS_Duplicate_EUF	May 18, 2022	3:50PM	AUS Leachate - pH 5.0	M22-My0045146	X		X	
19	SX_OB_20220518_19_54_S_S_Primary_EUF	May 18, 2022	7:54PM	AUS Leachate - pH 5.0	M22-My0045147	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									
20	SX_IB_20220519_00_05_SS_Primary_EUF	May 09, 2022	12:05AM	AUS Leachate - pH 5.0	M22-My0045148	X		X	
21	SX_IB_20220519_04_05_SS_Primary_EUF	May 19, 2022	4:05AM	AUS Leachate - pH 5.0	M22-My0045149	X		X	
22	SX_OB_20220519_04_18_SS_Primary_EUF	May 19, 2022	4:18AM	AUS Leachate - pH 5.0	M22-My0045150	X		X	
23	SX_IB_20220518_07_56_SS_Triplicate_EUF	May 18, 2022	7:56AM	AUS Leachate - Reagent Water	M22-My0045151	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									
24	SX_IB_20220518_08_00_SS_Primary_EUF	May 18, 2022	8:00AM	AUS Leachate - Reagent Water	M22-My0045152	X		X	
25	SX_OB_20220518_12_31_S_Primary_EUF	May 18, 2022	12:31PM	AUS Leachate - Reagent Water	M22-My0045153	X		X	
26	SX_IB_20220518_12_40_SS_Primary_EUF	May 18, 2022	12:40PM	AUS Leachate - Reagent Water	M22-My0045154	X		X	
27	SX_IB_20220518_15_46_SS_Primary_EUF	May 18, 2022	3:46PM	AUS Leachate - Reagent Water	M22-My0045155	X		X	
28	SX_IB_202205	May 18, 2022	3:50PM	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									
	18_15_50_SS_Duplicate_EU_F			- Reagent Water	My0045156				
29	SX_OB_20220518_19_54_SS_Primary_EU_F	May 18, 2022	7:54PM	AUS Leachate - Reagent Water	M22-My0045157	X		X	
30	SX_IB_20220519_00_05_SS_Primary_EUF	May 09, 2022	12:05AM	AUS Leachate - Reagent Water	M22-My0045158	X		X	
31	SX_IB_20220519_04_05_SS_Primary_EUF	May 19, 2022	4:05AM	AUS Leachate - Reagent Water	M22-My0045159	X		X	
32	SX_OB_20220	May 19, 2022	4:18AM	AUS Leachate	M22-	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									
32	SX_OB_20220519_04_18_SS_Primary_EUF	May 19, 2022	4:18AM	AUS Leachate - Reagent Water	M22-My0045160				
Test Counts						20	10	32	10

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)	%	127		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	121		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	122		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	128		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	119		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	114		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	136		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	103		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	110		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	56		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code		
LCS - % Recovery									
Perfluoroalkyl sulfonamido substances									
Perfluorooctane sulfonamide (FOSA)	%	122			50-150	Pass			
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	127			50-150	Pass			
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	135			50-150	Pass			
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	148			50-150	Pass			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	111			50-150	Pass			
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	83			50-150	Pass			
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	133			50-150	Pass			
LCS - % Recovery									
Perfluoroalkyl sulfonic acids (PFSA's)									
Perfluorobutanesulfonic acid (PFBS)	%	91			50-150	Pass			
Perfluorononanesulfonic acid (PFNS)	%	110			50-150	Pass			
Perfluoropropanesulfonic acid (PFPrS)	%	147			50-150	Pass			
Perfluoropentanesulfonic acid (PFPeS)	%	112			50-150	Pass			
Perfluorohexanesulfonic acid (PFHxS)	%	127			50-150	Pass			
Perfluoroheptanesulfonic acid (PFHpS)	%	126			50-150	Pass			
Perfluorooctanesulfonic acid (PFOS)	%	126			50-150	Pass			
Perfluorodecanesulfonic acid (PFDS)	%	90			50-150	Pass			
LCS - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	80			50-150	Pass			
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	102			50-150	Pass			
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	140			50-150	Pass			
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	105			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-My0044741	NCP	ug/L	0.10	0.08	5.0	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-My0049203	NCP	ug/L	2.7	2.4	10	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances									
				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M22-My0044741	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0044741	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0044741	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0044741	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0044741	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-My0044741	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0044741	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0044741	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-My0049203	NCP	ug/L	1.7	1.5	10	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-My0044741	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-My0044741	NCP	ug/L	< 0.01	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0044741	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0044741	NCP	ug/L	< 0.01	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0044741	NCP	ug/L	< 0.01	< 0.05	<1	30%	Pass

Comments
Sample Integrity

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

Qualifier Codes/Comments

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

Authorised by:

Michael Cassidy	Analytical Services Manager
Joseph Edouard	Senior Analyst-PFAS



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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CHAIN OF CUSTODY RECORD

Sydney Laboratory Unit F3 Bld F 11 Marx Road Law Creek West NSW 2060 02 9903 4000 EwrsSample@sydneylab.com
 Brisbane Laboratory Unit 1 21 Smallwood Place Brisbane QLD 4172 07 3902 4000 EwrsSample@brisbanelab.com
 Perth Laboratory Unit 2 31 Leach Highway Kwinana WA 6105 08 9251 9000 EwrsSample@perthlab.com
 Melbourne Laboratory 8 Montrose Road Traralgon South VIC 3175 03 5944 9000 EwrsSample@melbournelab.com

Company: AGON Environmental - Tunnel Spot Testing		Project No: JC0927	Project Manager: Craig Trimbur	Sample(s): HK - EP Risk Marsha - Agon							
Address: Unit H76, 63-88 Turner St, Port Melbourne VIC 3207		Project Name: WGTP-Tunnel Ref: 20220520044241-Eurofin-52	EDD Format: EDS - EUS-06	Handed over by:							
Contact Name: Craig Trimbur David Lawson		Spot Sample Preparation: Suite WGTP-52-TRB/PAN Phospor OC/P/PCR VOD/Viv/Chloride Metals (As, Cd, Cr, Cu, Ni, Pb, Hg, Ag, Sn, Mo, Sb, Zn)/C5H/CN Total Fluoride pH PFAS Extended Suite - 0.1 - 5ug/lg ASLP PHE - PFAS 0.01-0.05 ug/l ASLP Phospor - PFAS 0.01-0.05ug/l	Email for Invoice: finance@agonenviro.com.au LabReports.TST@agonenviro.com.au								
Phone No: +61 499 826 907 (Craig) +61 460 411 004 (David)			Email for Results: agonenviro@melbournelab.com.au agonenviro@perthlab.com.au melbournelabresults@wrig.com.au Amit.Keur@aglo-analytcs.com.au								
Special Directions: Please provide an interim lab report if finalised report has not been provided by 14 days from sample receipt. Please provide eSRN along with oter sample receipt documentation.		Containers: 500ml Plastic 250ml Plastic 125ml Plastic 200ml Amber Glass 40ml VOA vial 500ml PFAS Bottle Jar (Glass or HDPE)		Required Turnaround Time (TAT): Overnight (reporting by 5am) Same day 1 day 2 days 3 days							
Purchase Order:		Other (Maximum 4 total, max 100 characters)		Sample Comments: Dangerous Goods Hazard Warning							
Quote ID No: Agon WGTP TST											
No	Client Sample ID	Sampled Date/Time (reference to ref)	Matrix (e.g. soil, water)	ASLP PHE	ASLP Phospor	PFAS Extended Suite	ASLP PHE	ASLP Phospor	PFAS Extended Suite	Other (Maximum 4 total, max 100 characters)	Sample Comments
1	SX_OB_20220519_08_01_SS_Triplicate_EUF	19.05.22 8:01	S	X	X	X	X	X			
2	SX_IB_20220519_08_09_SS_Primary_EUF	19.05.22 8:09	S	X	X	X	X	X			
3	SX_IB_20220519_08_45_SR_Rinsate_EUF	19.05.22 8:45	W			X					
4	SX_IB_20220519_08_46_SB_Blank_EUF	19.05.22 8:46	W			X					
5	SX_IB_20220519_11_52_SS_Primary_EUF	19.05.22 11:52	S	X	X	X	X	X			
6	SX_OB_20220519_12_03_SS_Primary_EUF	19.05.22 12:03	S	X	X	X	X	X			
7	SX_IB_20220519_15_57_SS_Primary_EUF	19.05.22 15:57	S	X	X	X	X	X			
8	SX_IB_20220519_16_57_SS_Duplicate_EUF	19.05.22 16:57	S	X	X	X	X	X			
9	SX_IB_20220519_20_06_SS_Primary_EUF	19.05.22 20:06	S	X	X	X	X	X			
10	SX_IB_20220519_20_05_SS_Duplicate_EUF	19.05.22 20:05	S	X	X	X	X	X			
11	SX_OR_20220519_20_34_SS_Primary_EUF	19.05.22 20:34	S	X	X	X	X	X			
12	SX_IB_20220519_20_35_SR_Rinsate_EUF	19.05.22 20:35	W			X					
13	SX_IB_20220519_20_36_SB_Blank_EUF	19.05.22 20:36	W			X					
14	SX_IB_20220520_00_05_SS_Primary_EUF	20.05.22 00:05	S	X	X	X	X	X			
15	SX_IB_20220520_04_02_SS_Primary_EUF	20.05.22 04:02	S	X	X	X	X	X			
16	SX_IB_20220520_04_11_SS_Primary_EUF	20.05.22 04:11	S	X	X	X	X	X			
Total Counts				13	12	16	12	12			
Method of Shipment: <input checked="" type="checkbox"/> Courier <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Postal		Name: Emma		Signature: <i>[Signature]</i>	Date: 20/05/22	Time: 09:48					
Received By: Tahira		BY: [] MEL [] PER [] ACT [] NTL [] DRW		Signature: <i>[Signature]</i>	Date: 20/05	Time: 11:30	Temperature: 13.2				
Received By: Tahira		BY: [] MEL [] PER [] ACT [] NTL [] DRW		Signature: <i>[Signature]</i>	Date: 20/05	Time: 11:30	Report No: 13.2				

Yes **0**
13.3
~~10.1~~
 Correction: **13.2**

890217
Jake

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne

6 Monterey Road
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Sample Receipt Advice

Company name: Agon Environmental Pty Ltd - VIC
Contact name: Agon Lab Reports (Spoil Project)
Project name: 20220520044241-Eurofin-52
Project ID: JC0927
Turnaround time: 5 Day
Date/Time received: May 20, 2022 11:30 AM
Eurofins reference: 890217

Sample Information

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

Notes

Contact

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

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

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

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



Environment Testing

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

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

Project Name: 20220520044241-Eurofin-52
Project ID: JC0927

Order No.:
Report #: 890217
Phone: 08 8338 1009
Fax:

Received: May 20, 2022 11:30 AM
Due: May 27, 2022
Priority: 5 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_OB_20220519_08_01_S_S_Triplicate_EUF	May 19, 2022	8:01AM	Soil	M22-My0048417		X	X	X
2	SX_IB_20220519_08_09_SS_Primary_EUF	May 19, 2022	8:09AM	Soil	M22-My0048418		X	X	X
3	SX_IB_20220519_08_45_SR_Rinsate_EUF	May 19, 2022	8:45AM	Water	M22-My0048419			X	
4	SX_IB_20220519_08_46_SB	May 19, 2022	8:46AM	Water	M22-My0048420			X	



Environment Testing

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email: EnviroSales@eurofins.com

Company Name: Agon Environmental Pty Ltd - VIC
Address: 3/224 Glen Osmond Road
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SA 5063
Project Name: 20220520044241-Eurofin-52
Project ID: JC0927

Order No.:
Report #: 890217
Phone: 08 8338 1009
Fax:

Received: May 20, 2022 11:30 AM
Due: May 27, 2022
Priority: 5 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	Blank_EUF								
5	SX_IB_20220519_11_52_SS_Primary_EUF	May 19, 2022	12:03PM	Soil	M22-My0048421		X	X	X
6	SX_OB_20220519_12_03_SS_Primary_EUF	May 19, 2022	12:03PM	Soil	M22-My0048422		X	X	X
7	SX_IB_20220519_15_57_SS_Primary_EUF	May 19, 2022	3:57PM	Soil	M22-My0048423		X	X	X
8	SX_IB_20220519_15_57_SS_Duplicate_EU	May 19, 2022	3:57PM	Soil	M22-My0048424		X	X	X



Environment Testing

Eurofins Environment Testing Australia Pty Ltd

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NATA # 1261 Site # 20794

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NATA # 1261 Site # 25079

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NATA # 2377 Site # 2370

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Company Name: Agon Environmental Pty Ltd - VIC
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063
Project Name: 20220520044241-Eurofin-52
Project ID: JC0927

Order No.:
Report #: 890217
Phone: 08 8338 1009
Fax:

Received: May 20, 2022 11:30 AM
Due: May 27, 2022
Priority: 5 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	_Duplicate_EU F								
9	SX_IB_20220519_20_05_SS_Primary_EUF	May 19, 2022	8:05PM	Soil	M22-My0048425		X	X	X
10	SX_IB_20220519_20_05_SS_Duplicate_EUF	May 19, 2022	8:05PM	Soil	M22-My0048426		X	X	X
11	SX_OB_20220519_20_34_SS_Primary_EUF	May 19, 2022	8:34PM	Soil	M22-My0048427		X	X	X
12	SX_IB_202205	May 19, 2022	8:35PM	Water	M22-			X	



Environment Testing

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

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

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

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

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

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Limited

NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
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IANZ # 1327

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

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

Project Name: 20220520044241-Eurofin-52
Project ID: JC0927

Order No.:
Report #: 890217
Phone: 08 8338 1009
Fax:

Received: May 20, 2022 11:30 AM
Due: May 27, 2022
Priority: 5 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	19_20_35_SR_Rinsate_EUF				My0048428				
13	SX_IB_20220519_20_36_SB_Blank_EUF	May 19, 2022	8:36PM	Water	M22-My0048429		X		
14	SX_IB_20220520_00_05_SS_Primary_EUF	May 20, 2022	12:05AM	Soil	M22-My0048430		X	X	X
15	SX_IB_20220520_04_02_SS_Primary_EUF	May 20, 2022	4:02AM	Soil	M22-My0048431		X	X	X
16	SX_IB_20220520_04_11_SS_Primary_EUF	May 20, 2022	4:11AM	Soil	M22-My0048432		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									
17	SX_OB_20220519_08_01_S_S_Triplicate_EUF	May 19, 2022	8:01AM	AUS Leachate - pH 5.0	M22-My0048433	X		X	
18	SX_IB_20220519_08_09_SS_Primary_EUF	May 19, 2022	8:09AM	AUS Leachate - pH 5.0	M22-My0048434	X		X	
19	SX_IB_20220519_11_52_SS_Primary_EUF	May 19, 2022	12:03PM	AUS Leachate - pH 5.0	M22-My0048435	X		X	
20	SX_OB_20220519_12_03_S_S_Primary_EUF	May 19, 2022	12:03PM	AUS Leachate - pH 5.0	M22-My0048436	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									
21	SX_IB_20220519_15_57_SS_Primary_EUF	May 19, 2022	3:57PM	AUS Leachate - pH 5.0	M22-My0048437	X		X	
22	SX_IB_20220519_15_57_SS_Duplicate_EUF	May 19, 2022	3:57PM	AUS Leachate - pH 5.0	M22-My0048438	X		X	
23	SX_IB_20220519_20_05_SS_Primary_EUF	May 19, 2022	8:05PM	AUS Leachate - pH 5.0	M22-My0048439	X		X	
24	SX_IB_20220519_20_05_SS_Duplicate_EUF	May 19, 2022	8:05PM	AUS Leachate - pH 5.0	M22-My0048440	X		X	

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Project Name: 20220520044241-Eurofin-52
Project ID: JC0927

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
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									
25	SX_OB_20220519_20_34_S_S_Primary_EUF	May 19, 2022	8:34PM	AUS Leachate - pH 5.0	M22-My0048441	X		X	
26	SX_IB_20220520_00_05_SS_Primary_EUF	May 20, 2022	12:05AM	AUS Leachate - pH 5.0	M22-My0048442	X		X	
27	SX_IB_20220520_04_02_SS_Primary_EUF	May 20, 2022	4:02AM	AUS Leachate - pH 5.0	M22-My0048443	X		X	
28	SX_IB_20220520_04_11_SS_Primary_EUF	May 20, 2022	4:11AM	AUS Leachate - pH 5.0	M22-My0048444	X		X	
29	SX_OB_20220	May 19, 2022	8:01AM	AUS Leachate	M22-	X		X	

Company Name: Agon Environmental Pty Ltd - VIC
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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									
	519_08_01_S S_Triplicate_E UF			- Reagent Water	My0048445				
30	SX_IB_202205 19_08_09_SS _Primary_EUF	May 19, 2022	8:09AM	AUS Leachate - Reagent Water	M22- My0048446	X		X	
31	SX_IB_202205 19_11_52_SS _Primary_EUF	May 19, 2022	12:03PM	AUS Leachate - Reagent Water	M22- My0048447	X		X	
32	SX_OB_20220 519_12_03_S S_Primary_EU F	May 19, 2022	12:03PM	AUS Leachate - Reagent Water	M22- My0048448	X		X	
33	SX_IB_202205	May 19, 2022	3:57PM	AUS Leachate	M22-	X		X	

Company Name: Agon Environmental Pty Ltd - VIC
Address: 3/224 Glen Osmond Road
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Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
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									
33	SX_IB_20220519_15_57_SS_Primary_EUF	May 19, 2022	3:57PM	AUS Leachate - Reagent Water	M22-My0048449				
34	SX_IB_20220519_15_57_SS_Duplicate_EUF	May 19, 2022	3:57PM	AUS Leachate - Reagent Water	M22-My0048450	X		X	
35	SX_IB_20220519_20_05_SS_Primary_EUF	May 19, 2022	8:05PM	AUS Leachate - Reagent Water	M22-My0048451	X		X	
36	SX_IB_20220519_20_05_SS_Duplicate_EUF	May 19, 2022	8:05PM	AUS Leachate - Reagent Water	M22-My0048452	X		X	

Company Name: Agon Environmental Pty Ltd - VIC
Address: 3/224 Glen Osmond Road
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SA 5063
Project Name: 20220520044241-Eurofin-52
Project ID: JC0927

Order No.:
Report #: 890217
Phone: 08 8338 1009
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Received: May 20, 2022 11:30 AM
Due: May 27, 2022
Priority: 5 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
37	SX_OB_20220519_20_34_S_S_Primary_EUF	May 19, 2022	8:34PM	AUS Leachate - Reagent Water	M22-My0048453	X		X	
38	SX_IB_20220520_00_05_SS_Primary_EUF	May 20, 2022	12:05AM	AUS Leachate - Reagent Water	M22-My0048454	X		X	
39	SX_IB_20220520_04_02_SS_Primary_EUF	May 20, 2022	4:02AM	AUS Leachate - Reagent Water	M22-My0048455	X		X	
40	SX_IB_20220520_04_11_SS_Primary_EUF	May 20, 2022	4:11AM	AUS Leachate - Reagent Water	M22-My0048456	X		X	
Test Counts						24	12	40	12

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



NATA Accredited
Accreditation Number 1261
Site Number 1254

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

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

Report **890217-L**
Project name **20220520044241-Eurofin-52**
Project ID **JC0927**
Received Date **May 20, 2022**

Client Sample ID			SX_OB_20220 519_08_01_SS _TriPLICATE_EU F	SX_IB_202205 19_08_09_SS _Primary_EUF	SX_IB_202205 19_11_52_SS _Primary_EUF	SX_OB_20220 519_12_03_SS _Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0
Eurofins Sample No.			M22- My0048433	M22- My0048434	M22- My0048435	M22- My0048436
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	5.0	5.0	5.0	5.0
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	%	100	83	90	79
13C5-PFPeA (surr.)	1	%	114	80	77	94
13C5-PFHxA (surr.)	1	%	111	75	78	89
13C4-PFHpA (surr.)	1	%	112	82	84	93
13C8-PFOA (surr.)	1	%	94	54	64	76
13C5-PFNA (surr.)	1	%	112	84	96	82
13C6-PFDA (surr.)	1	%	104	87	90	79
13C2-PFUnDA (surr.)	1	%	99	91	94	65
13C2-PFDoDA (surr.)	1	%	100	75	95	69
13C2-PFTTeDA (surr.)	1	%	41	41	77	24

Client Sample ID			SX_OB_20220 519_08_01_SS _TriPLICATE_EU F	SX_IB_202205 19_08_09_SS _Primary_EUF	SX_IB_202205 19_11_52_SS _Primary_EUF	SX_OB_20220 519_12_03_SS _Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0
Eurofins Sample No.			M22- My0048433	M22- My0048434	M22- My0048435	M22- My0048436
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	%	57	67	87	87
D3-N-MeFOSA (surr.)	1	%	12	16	12	10
D5-N-EtFOSA (surr.)	1	%	17	32	15	11
D7-N-MeFOSE (surr.)	1	%	24	34	39	12
D9-N-EtFOSE (surr.)	1	%	56	70	93	35
D5-N-EtFOSAA (surr.)	1	%	100	72	97	73
D3-N-MeFOSAA (surr.)	1	%	75	75	106	66
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	%	94	86	86	66
18O2-PFHxS (surr.)	1	%	115	91	90	89
13C8-PFOS (surr.)	1	%	99	94	91	75
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	93	109	53
13C2-6:2 FTSA (surr.)	1	%	69	87	104	53
13C2-8:2 FTSA (surr.)	1	%	66	51	58	51
13C2-10:2 FTSA (surr.)	1	%	77	84	81	50
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_IB_202205_19_15_57_SS_Primary_EUF	SX_IB_202205_19_15_57_SS_Duplicate_EUF	SX_IB_202205_19_20_05_SS_Primary_EUF	SX_IB_202205_19_20_05_SS_Duplicate_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-My0048437	M22-My0048438	M22-My0048439	M22-My0048440
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	5.0	5.0	5.0	5.0
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 (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	%	85	71	89	85
13C5-PFPeA (surr.)	1	%	84	75	97	75
13C5-PFHxA (surr.)	1	%	74	64	80	82
13C4-PFHpA (surr.)	1	%	78	64	83	83
13C8-PFOA (surr.)	1	%	53	54	62	50
13C5-PFNA (surr.)	1	%	84	73	97	95
13C6-PFDA (surr.)	1	%	88	74	89	89
13C2-PFUnDA (surr.)	1	%	84	74	100	88
13C2-PFDoDA (surr.)	1	%	89	81	109	89
13C2-PFTeDA (surr.)	1	%	59	62	94	41
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	%	60	54	74	67
D3-N-MeFOSA (surr.)	1	%	29	21	46	15
D5-N-EtFOSA (surr.)	1	%	39	36	12	15
D7-N-MeFOSE (surr.)	1	%	51	19	59	46
D9-N-EtFOSE (surr.)	1	%	73	66	91	60
D5-N-EtFOSAA (surr.)	1	%	72	66	95	62
D3-N-MeFOSAA (surr.)	1	%	76	65	93	80

Client Sample ID			SX_IB_202205 19_15_57_SS Primary_EUF	SX_IB_202205 19_15_57_SS Duplicate_EUF	SX_IB_202205 19_20_05_SS Primary_EUF	SX_IB_202205 19_20_05_SS Duplicate_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- My0048437	M22- My0048438	M22- My0048439	M22- My0048440
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	%	80	63	78	75
18O2-PFHxS (surr.)	1	%	88	76	89	87
13C8-PFOS (surr.)	1	%	84	79	103	83
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	%	98	77	113	94
13C2-6:2 FTSA (surr.)	1	%	93	73	113	74
13C2-8:2 FTSA (surr.)	1	%	56	43	56	54
13C2-10:2 FTSA (surr.)	1	%	69	74	91	77
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 519_20_34_SS Primary_EUF	SX_IB_202205 20_00_05_SS Primary_EUF	SX_IB_202205 20_04_02_SS Primary_EUF	SX_IB_202205 20_04_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- My0048441	M22- My0048442	M22- My0048443	M22- My0048444
Date Sampled			May 19, 2022	May 20, 2022	May 20, 2022	May 20, 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	5.0	5.0	5.0	5.0
pH (off)	0.1	pH Units	5.2	5.1	5.2	5.2

Client Sample ID			SX_OB_20220 519_20_34_SS _Primary_EUF	SX_IB_202205 20_00_05_SS _Primary_EUF	SX_IB_202205 20_04_02_SS _Primary_EUF	SX_IB_202205 20_04_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- My0048441	M22- My0048442	M22- My0048443	M22- My0048444
Date Sampled			May 19, 2022	May 20, 2022	May 20, 2022	May 20, 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	%	85	91	88	84
13C5-PFPeA (surr.)	1	%	95	77	98	87
13C5-PFHxA (surr.)	1	%	88	85	91	79
13C4-PFHpA (surr.)	1	%	99	92	91	87
13C8-PFOA (surr.)	1	%	58	68	82	53
13C5-PFNA (surr.)	1	%	89	102	94	88
13C6-PFDA (surr.)	1	%	87	92	95	91
13C2-PFUnDA (surr.)	1	%	82	97	89	88
13C2-PFDoDA (surr.)	1	%	75	102	85	102
13C2-PFTeDA (surr.)	1	%	31	105	32	84
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	%	71	81	59	70
D3-N-MeFOSA (surr.)	1	%	14	31	16	19
D5-N-EtFOSA (surr.)	1	%	14	42	16	23
D7-N-MeFOSE (surr.)	1	%	14	24	23	67
D9-N-EtFOSE (surr.)	1	%	34	86	55	81
D5-N-EtFOSAA (surr.)	1	%	68	88	71	103
D3-N-MeFOSAA (surr.)	1	%	81	84	89	94
Perfluoroalkyl sulfonic acids (PFSA)						
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 519_20_34_SS _Primary_EUF	SX_IB_202205 20_00_05_SS _Primary_EUF	SX_IB_202205 20_04_02_SS _Primary_EUF	SX_IB_202205 20_04_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- My0048441	M22- My0048442	M22- My0048443	M22- My0048444
Date Sampled			May 19, 2022	May 20, 2022	May 20, 2022	May 20, 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	%	67	64	100	45
18O2-PFHxS (surr.)	1	%	96	99	105	94
13C8-PFOS (surr.)	1	%	87	97	83	87
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	%	68	111	85	97
13C2-6:2 FTSA (surr.)	1	%	70	107	67	90
13C2-8:2 FTSA (surr.)	1	%	58	67	51	56
13C2-10:2 FTSA (surr.)	1	%	64	107	66	126
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 519_08_01_SS _Triple_EU	SX_IB_202205 19_08_09_SS _Primary_EUF	SX_IB_202205 19_11_52_SS _Primary_EUF	SX_OB_20220 519_12_03_SS _Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0048445	M22- My0048446	M22- My0048447	M22- My0048448
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	6.2	6.2	6.2	6.2
pH (off)	0.1	pH Units	7.5	8.1	8.1	8.1
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 519_08_01_SS _TriPLICATE_EU F	SX_IB_202205 19_08_09_SS _Primary_EUF	SX_IB_202205 19_11_52_SS _Primary_EUF	SX_OB_20220 519_12_03_SS _Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0048445	M22- My0048446	M22- My0048447	M22- My0048448
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	%	98	86	80	100
13C5-PFPeA (surr.)	1	%	102	117	78	108
13C5-PFHxA (surr.)	1	%	103	56	74	107
13C4-PFHpA (surr.)	1	%	112	134	80	118
13C8-PFOA (surr.)	1	%	102	128	54	111
13C5-PFNA (surr.)	1	%	104	100	80	108
13C6-PFDA (surr.)	1	%	106	114	88	107
13C2-PFUnDA (surr.)	1	%	101	106	72	100
13C2-PFDoDA (surr.)	1	%	103	107	56	94
13C2-PFTeDA (surr.)	1	%	67	58	21	28
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	83	70	66
D3-N-MeFOSA (surr.)	1	%	15	19	11	10
D5-N-EtFOSA (surr.)	1	%	12	23	11	19
D7-N-MeFOSE (surr.)	1	%	28	64	31	15
D9-N-EtFOSE (surr.)	1	%	56	76	37	29
D5-N-EtFOSAA (surr.)	1	%	81	116	66	83
D3-N-MeFOSAA (surr.)	1	%	101	96	75	88
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	%	87	76	46	82
18O2-PFHxS (surr.)	1	%	98	123	81	106
13C8-PFOS (surr.)	1	%	115	110	84	105

Client Sample ID			SX_OB_20220519_08_01_SS_Triplicate_EUF	SX_IB_20220519_08_09_SS_Primary_EUF	SX_IB_20220519_11_52_SS_Primary_EUF	SX_OB_20220519_12_03_SS_Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-My0048445	M22-My0048446	M22-My0048447	M22-My0048448
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	%	93	127	88	67
13C2-6:2 FTSA (surr.)	1	%	78	68	81	73
13C2-8:2 FTSA (surr.)	1	%	67	60	58	71
13C2-10:2 FTSA (surr.)	1	%	85	90	47	84
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_IB_20220519_15_57_SS_Primary_EUF	SX_IB_20220519_15_57_SS_Duplicate_EUF	SX_IB_20220519_20_05_SS_Primary_EUF	SX_IB_20220519_20_05_SS_Duplicate_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-My0048449	M22-My0048450	M22-My0048451	M22-My0048452
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	6.2	6.2	6.2	6.2
pH (off)	0.1	pH Units	8.0	8.2	8.2	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	%	94	89	95	59

Client Sample ID			SX_IB_202205 19_15_57_SS Primary_EUF	SX_IB_202205 19_15_57_SS Duplicate_EUF	SX_IB_202205 19_20_05_SS Primary_EUF	SX_IB_202205 19_20_05_SS Duplicate_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22- My0048449	M22- My0048450	M22- My0048451	M22- My0048452
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C5-PFPeA (surr.)	1	%	95	92	93	54
13C5-PFHxA (surr.)	1	%	87	81	88	54
13C4-PFHpA (surr.)	1	%	89	85	102	59
13C8-PFOA (surr.)	1	%	60	52	70	63
13C5-PFNA (surr.)	1	%	99	97	98	59
13C6-PFDA (surr.)	1	%	94	95	110	67
13C2-PFUnDA (surr.)	1	%	102	95	104	66
13C2-PFDoDA (surr.)	1	%	96	97	99	68
13C2-PFTeDA (surr.)	1	%	53	72	55	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	%	83	90	91	60
D3-N-MeFOSA (surr.)	1	%	39	22	48	31
D5-N-EtFOSA (surr.)	1	%	43	25	45	44
D7-N-MeFOSE (surr.)	1	%	43	31	42	37
D9-N-EtFOSE (surr.)	1	%	81	71	89	51
D5-N-EtFOSAA (surr.)	1	%	82	98	115	64
D3-N-MeFOSAA (surr.)	1	%	70	109	80	65
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	%	76	81	67	57
18O2-PFHxS (surr.)	1	%	97	99	96	67
13C8-PFOS (surr.)	1	%	96	89	114	60

Client Sample ID			SX_IB_202205_19_15_57_SS_Primary_EUF	SX_IB_202205_19_15_57_SS_Duplicate_EUF	SX_IB_202205_19_20_05_SS_Primary_EUF	SX_IB_202205_19_20_05_SS_Duplicate_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-My0048449	M22-My0048450	M22-My0048451	M22-My0048452
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	%	102	103	107	65
13C2-6:2 FTSA (surr.)	1	%	80	97	90	65
13C2-8:2 FTSA (surr.)	1	%	70	69	63	55
13C2-10:2 FTSA (surr.)	1	%	63	111	68	43
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_519_20_34_SS_Primary_EUF	SX_IB_202205_20_00_05_SS_Primary_EUF	SX_IB_202205_20_04_02_SS_Primary_EUF	SX_IB_202205_20_04_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-My0048453	M22-My0048454	M22-My0048455	M22-My0048456
Date Sampled			May 19, 2022	May 20, 2022	May 20, 2022	May 20, 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	6.2	6.2	6.2	6.2
pH (off)	0.1	pH Units	8.4	8.3	8.4	8.3
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	%	84	83	103	88
13C5-PFPeA (surr.)	1	%	96	90	115	92

Client Sample ID			SX_OB_20220 519_20_34_SS _Primary_EUF	SX_IB_202205 20_00_05_SS _Primary_EUF	SX_IB_202205 20_04_02_SS _Primary_EUF	SX_IB_202205 20_04_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- My0048453	M22- My0048454	M22- My0048455	M22- My0048456
Date Sampled			May 19, 2022	May 20, 2022	May 20, 2022	May 20, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C5-PFHxA (surr.)	1	%	89	77	109	82
13C4-PFHpA (surr.)	1	%	97	76	97	87
13C8-PFOA (surr.)	1	%	97	64	95	60
13C5-PFNA (surr.)	1	%	97	94	115	95
13C6-PFDA (surr.)	1	%	91	95	106	98
13C2-PFUnDA (surr.)	1	%	93	92	126	99
13C2-PFDoDA (surr.)	1	%	101	91	114	93
13C2-PFTeDA (surr.)	1	%	80	67	86	69
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	%	83	86	100	81
D3-N-MeFOSA (surr.)	1	%	39	30	19	25
D5-N-EtFOSA (surr.)	1	%	40	31	13	28
D7-N-MeFOSE (surr.)	1	%	26	47	54	14
D9-N-EtFOSE (surr.)	1	%	71	65	70	67
D5-N-EtFOSAA (surr.)	1	%	86	82	92	82
D3-N-MeFOSAA (surr.)	1	%	103	93	112	87
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	%	78	61	123	54
18O2-PFHxS (surr.)	1	%	85	98	111	96
13C8-PFOS (surr.)	1	%	87	86	104	93
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

Client Sample ID			SX_OB_20220519_20_34_SS_Primary_EUF	SX_IB_20220520_00_05_SS_Primary_EUF	SX_IB_20220520_04_02_SS_Primary_EUF	SX_IB_20220520_04_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-My0048453	M22-My0048454	M22-My0048455	M22-My0048456
Date Sampled			May 19, 2022	May 20, 2022	May 20, 2022	May 20, 2022
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
13C2-4:2 FTSA (surr.)	1	%	67	105	102	96
13C2-6:2 FTSA (surr.)	1	%	73	98	85	93
13C2-8:2 FTSA (surr.)	1	%	63	62	71	66
13C2-10:2 FTSA (surr.)	1	%	84	100	105	74
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 20, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	May 20, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	May 20, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 20, 2022 11:30 AM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	890217	Due:	May 27, 2022
Project Name:	20220520044241-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_20220519_08_01_S_S_Triplicate_EUF	May 19, 2022	8:01AM	Soil	M22-My0048417		X	X	X
2	SX_IB_20220519_08_09_SS_Primary_EUF	May 19, 2022	8:09AM	Soil	M22-My0048418		X	X	X
3	SX_IB_20220519_08_45_SR_Rinsate_EUF	May 19, 2022	8:45AM	Water	M22-My0048419			X	
4	SX_IB_20220519_08_46_SB	May 19, 2022	8:46AM	Water	M22-My0048420			X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 20, 2022 11:30 AM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	890217	Due:	May 27, 2022
Project Name:	20220520044241-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									
	Blank_EUF								
5	SX_IB_20220519_11_52_SS_Primary_EUF	May 19, 2022	12:03PM	Soil	M22-My0048421		X	X	X
6	SX_OB_20220519_12_03_SS_Primary_EUF	May 19, 2022	12:03PM	Soil	M22-My0048422		X	X	X
7	SX_IB_20220519_15_57_SS_Primary_EUF	May 19, 2022	3:57PM	Soil	M22-My0048423		X	X	X
8	SX_IB_20220519_15_57_SS_Duplicate_EU	May 19, 2022	3:57PM	Soil	M22-My0048424		X	X	X

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 20, 2022 11:30 AM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	890217	Due:	May 27, 2022
Project Name:	20220520044241-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									
	_Duplicate_EU F								
9	SX_IB_20220519_20_05_SS_Primary_EUF	May 19, 2022	8:05PM	Soil	M22-My0048425		X	X	X
10	SX_IB_20220519_20_05_SS_Duplicate_EUF	May 19, 2022	8:05PM	Soil	M22-My0048426		X	X	X
11	SX_OB_20220519_20_34_SS_Primary_EUF	May 19, 2022	8:34PM	Soil	M22-My0048427		X	X	X
12	SX_IB_202205	May 19, 2022	8:35PM	Water	M22-			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									
	19_20_35_SR_Rinsate_EUF				My0048428				
13	SX_IB_20220519_20_36_SB_Blank_EUF	May 19, 2022	8:36PM	Water	M22-My0048429		X		
14	SX_IB_20220520_00_05_SS_Primary_EUF	May 20, 2022	12:05AM	Soil	M22-My0048430		X	X	X
15	SX_IB_20220520_04_02_SS_Primary_EUF	May 20, 2022	4:02AM	Soil	M22-My0048431		X	X	X
16	SX_IB_20220520_04_11_SS_Primary_EUF	May 20, 2022	4:11AM	Soil	M22-My0048432		X	X	X

Company Name: Agon Environmental Pty Ltd - VIC
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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									
17	SX_OB_20220519_08_01_S_S_Triplicate_EUF	May 19, 2022	8:01AM	AUS Leachate - pH 5.0	M22-My0048433	X		X	
18	SX_IB_20220519_08_09_SS_Primary_EUF	May 19, 2022	8:09AM	AUS Leachate - pH 5.0	M22-My0048434	X		X	
19	SX_IB_20220519_11_52_SS_Primary_EUF	May 19, 2022	12:03PM	AUS Leachate - pH 5.0	M22-My0048435	X		X	
20	SX_OB_20220519_12_03_S_S_Primary_EUF	May 19, 2022	12:03PM	AUS Leachate - pH 5.0	M22-My0048436	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									
21	SX_IB_20220519_15_57_SS_Primary_EUF	May 19, 2022	3:57PM	AUS Leachate - pH 5.0	M22-My0048437	X		X	
22	SX_IB_20220519_15_57_SS_Duplicate_EUF	May 19, 2022	3:57PM	AUS Leachate - pH 5.0	M22-My0048438	X		X	
23	SX_IB_20220519_20_05_SS_Primary_EUF	May 19, 2022	8:05PM	AUS Leachate - pH 5.0	M22-My0048439	X		X	
24	SX_IB_20220519_20_05_SS_Duplicate_EUF	May 19, 2022	8:05PM	AUS Leachate - pH 5.0	M22-My0048440	X		X	

Company Name: Agon Environmental Pty Ltd - VIC
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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									
25	SX_OB_20220519_20_34_S_S_Primary_EUF	May 19, 2022	8:34PM	AUS Leachate - pH 5.0	M22-My0048441	X		X	
26	SX_IB_20220520_00_05_SS_Primary_EUF	May 20, 2022	12:05AM	AUS Leachate - pH 5.0	M22-My0048442	X		X	
27	SX_IB_20220520_04_02_SS_Primary_EUF	May 20, 2022	4:02AM	AUS Leachate - pH 5.0	M22-My0048443	X		X	
28	SX_IB_20220520_04_11_SS_Primary_EUF	May 20, 2022	4:11AM	AUS Leachate - pH 5.0	M22-My0048444	X		X	
29	SX_OB_20220519_20_34_S_S_Primary_EUF	May 19, 2022	8:01AM	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									
	519_08_01_S S_Triplicate_E UF			- Reagent Water	My0048445				
30	SX_IB_202205 19_08_09_SS _Primary_EUF	May 19, 2022	8:09AM	AUS Leachate - Reagent Water	M22- My0048446	X		X	
31	SX_IB_202205 19_11_52_SS _Primary_EUF	May 19, 2022	12:03PM	AUS Leachate - Reagent Water	M22- My0048447	X		X	
32	SX_OB_20220 519_12_03_S S_Primary_EU F	May 19, 2022	12:03PM	AUS Leachate - Reagent Water	M22- My0048448	X		X	
33	SX_IB_202205	May 19, 2022	3:57PM	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									
33	SX_IB_20220519_15_57_SS_Primary_EUF	May 19, 2022	3:57PM	AUS Leachate - Reagent Water	M22-My0048449				
34	SX_IB_20220519_15_57_SS_Duplicate_EUF	May 19, 2022	3:57PM	AUS Leachate - Reagent Water	M22-My0048450	X		X	
35	SX_IB_20220519_20_05_SS_Primary_EUF	May 19, 2022	8:05PM	AUS Leachate - Reagent Water	M22-My0048451	X		X	
36	SX_IB_20220519_20_05_SS_Duplicate_EUF	May 19, 2022	8:05PM	AUS Leachate - Reagent Water	M22-My0048452	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									
37	SX_OB_20220519_20_34_S_S_Primary_EUF	May 19, 2022	8:34PM	AUS Leachate - Reagent Water	M22-My0048453	X		X	
38	SX_IB_20220520_00_05_SS_Primary_EUF	May 20, 2022	12:05AM	AUS Leachate - Reagent Water	M22-My0048454	X		X	
39	SX_IB_20220520_04_02_SS_Primary_EUF	May 20, 2022	4:02AM	AUS Leachate - Reagent Water	M22-My0048455	X		X	
40	SX_IB_20220520_04_11_SS_Primary_EUF	May 20, 2022	4:11AM	AUS Leachate - Reagent Water	M22-My0048456	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)	%	105		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	113		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	81		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	84		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	90		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	81		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	68		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	92		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	104		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	99		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	70		50-150	Pass	

Test		Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
LCS - % Recovery									
Perfluoroalkyl sulfonamido substances									
Perfluorooctane sulfonamide (FOSA)		%	72			50-150	Pass		
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)		%	118			50-150	Pass		
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)		%	55			50-150	Pass		
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)		%	120			50-150	Pass		
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)		%	71			50-150	Pass		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)		%	58			50-150	Pass		
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)		%	71			50-150	Pass		
LCS - % Recovery									
Perfluoroalkyl sulfonic acids (PFSA)									
Perfluorobutanesulfonic acid (PFBS)		%	70			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)		%	76			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)		%	98			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)		%	85			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)		%	86			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)		%	80			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)		%	87			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)		%	55			50-150	Pass		
LCS - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)		%	91			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)		%	105			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)		%	118			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)		%	118			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-My0048444	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances									
				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M22-My0048444	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0048444	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0048444	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0048444	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0048444	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-My0048444	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0048444	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0048444	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0048444	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-My0048446	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-My0048446	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0048446	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0048446	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0048446	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0048446	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-My0048446	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0048446	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0048446	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0048446	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCA)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-My0048450	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotridecanoic acid (PFTTrDA)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-My0048450	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0048450	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0048450	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0048450	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0048450	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-My0048450	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0048450	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0048450	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0048450	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass

Comments
Sample Integrity

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

Qualifier Codes/Comments

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

Authorised by:

Catherine Wilson	Analytical Services Manager
Joseph Edouard	Senior Analyst-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



NATA Accredited
Accreditation Number 1261
Site Number 1254

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

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

Report **890217-S**
Project name **20220520044241-Eurofin-52**
Project ID **JC0927**
Received Date **May 20, 2022**

Client Sample ID			SX_OB_20220 519_08_01_SS _TriPLICATE_EU F	SX_IB_202205 19_08_09_SS _Primary_EUF	SX_IB_202205 19_11_52_SS _Primary_EUF	SX_OB_20220 519_12_03_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048417	M22- My0048418	M22- My0048421	M22- My0048422
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	31	< 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 519_08_01_SS _TriPLICATE_EU F	SX_IB_202205 19_08_09_SS _Primary_EUF	SX_IB_202205 19_11_52_SS _Primary_EUF	SX_OB_20220 519_12_03_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048417	M22- My0048418	M22- My0048421	M22- My0048422
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	%	132	122	104	72
Toluene-d8 (surr.)	1	%	124	118	97	69
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 519_08_01_SS _TriPLICATE_EU F	SX_IB_202205 19_08_09_SS _Primary_EUF	SX_IB_202205 19_11_52_SS _Primary_EUF	SX_OB_20220 519_12_03_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048417	M22- My0048418	M22- My0048421	M22- My0048422
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	%	94	105	71	65
p-Terphenyl-d14 (surr.)	1	%	93	91	87	110
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	%	142	78	122	105
Tetrachloro-m-xylene (surr.)	1	%	89	87	124	105

Client Sample ID			SX_OB_20220 519_08_01_SS _TriPLICATE_EU F	SX_IB_202205 19_08_09_SS _Primary_EUF	SX_IB_202205 19_11_52_SS _Primary_EUF	SX_OB_20220 519_12_03_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048417	M22- My0048418	M22- My0048421	M22- My0048422
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	%	142	78	122	105
Tetrachloro-m-xylene (surr.)	1	%	89	87	124	105
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	%	57	65	int	int
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	< 100	< 100	< 100	130
pH (1:5 Aqueous extract at 25°C as rec.)						
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.2	8.4	8.0	8.4
% Moisture						
% Moisture	1	%	36	24	29	29
Heavy Metals						
Arsenic	2	mg/kg	34	22	18	60
Cadmium	1	mg/kg	< 1	< 1	< 1	< 1
Chromium	5	mg/kg	130	180	150	110
Copper	5	mg/kg	84	82	72	82
Lead	5	mg/kg	6.6	< 5	< 5	6.1
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_OB_20220 519_08_01_SS _TriPLICATE_EU F	SX_IB_202205 19_08_09_SS _Primary_EUF	SX_IB_202205 19_11_52_SS _Primary_EUF	SX_OB_20220 519_12_03_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048417	M22- My0048418	M22- My0048421	M22- My0048422
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit				
Heavy Metals						
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	220	250	210	220
Selenium	5	mg/kg	< 5	< 5	< 5	< 5
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	160	140	150	130
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	%	56	140	60	57
13C5-PFPeA (surr.)	1	%	71	133	70	49
13C5-PFHxA (surr.)	1	%	63	139	82	60
13C4-PFHpA (surr.)	1	%	60	134	62	55
13C8-PFOA (surr.)	1	%	57	119	59	64
13C5-PFNA (surr.)	1	%	61	117	59	56
13C6-PFDA (surr.)	1	%	73	123	84	85
13C2-PFUnDA (surr.)	1	%	69	146	64	52
13C2-PFDoDA (surr.)	1	%	66	138	68	66
13C2-PFTeDA (surr.)	1	%	77	147	66	90
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	%	64	80	60	59
D3-N-MeFOSA (surr.)	1	%	80	129	82	63
D5-N-EtFOSA (surr.)	1	%	59	134	64	54
D7-N-MeFOSE (surr.)	1	%	58	130	84	74
D9-N-EtFOSE (surr.)	1	%	63	136	74	63
D5-N-EtFOSAA (surr.)	1	%	95	75	73	71
D3-N-MeFOSAA (surr.)	1	%	101	79	68	95

Client Sample ID			SX_OB_20220 519_08_01_SS _TriPLICATE_EUF	SX_IB_202205 19_08_09_SS _Primary_EUF	SX_IB_202205 19_11_52_SS _Primary_EUF	SX_OB_20220 519_12_03_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048417	M22- My0048418	M22- My0048421	M22- My0048422
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	%	55	147	52	52
18O2-PFHxS (surr.)	1	%	56	138	64	58
13C8-PFOS (surr.)	1	%	64	138	53	62
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	%	60	85	75	58
13C2-6:2 FTSA (surr.)	1	%	73	76	108	52
13C2-8:2 FTSA (surr.)	1	%	78	110	102	107
13C2-10:2 FTSA (surr.)	1	%	91	102	48	83
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_IB_202205 19_15_57_SS _Primary_EUF	SX_IB_202205 19_15_57_SS _Duplicate_EUF	SX_IB_202205 19_20_05_SS _Primary_EUF	SX_IB_202205 19_20_05_SS _Duplicate_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048423	M22- My0048424	M22- My0048425	M22- My0048426
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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

Client Sample ID			SX_IB_202205 19_15_57_SS_ Primary_EUF	SX_IB_202205 19_15_57_SS_ Duplicate_EUF	SX_IB_202205 19_20_05_SS_ Primary_EUF	SX_IB_202205 19_20_05_SS_ Duplicate_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048423	M22- My0048424	M22- My0048425	M22- My0048426
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
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
1.1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SX_IB_202205 19_15_57_SS Primary_EUF	SX_IB_202205 19_15_57_SS Duplicate_EUF	SX_IB_202205 19_20_05_SS Primary_EUF	SX_IB_202205 19_20_05_SS Duplicate_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048423	M22- My0048424	M22- My0048425	M22- My0048426
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	65	119	108	78
Toluene-d8 (surr.)	1	%	64	126	98	75
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	%	62	68	59	67
p-Terphenyl-d14 (surr.)	1	%	86	54	130	114

Client Sample ID			SX_IB_202205 19_15_57_SS_ Primary_EUF	SX_IB_202205 19_15_57_SS_ Duplicate_EUF	SX_IB_202205 19_20_05_SS_ Primary_EUF	SX_IB_202205 19_20_05_SS_ Duplicate_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048423	M22- My0048424	M22- My0048425	M22- My0048426
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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
Dibutylchloroendate (surr.)	1	%	77	69	110	87
Tetrachloro-m-xylene (surr.)	1	%	80	60	79	117
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	%	77	69	110	87
Tetrachloro-m-xylene (surr.)	1	%	80	60	79	117
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-My0048423	M22-My0048424	M22-My0048425	M22-My0048426
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	%	52	41	int	int
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Heavy Metals						
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
Fluoride (Total)	100	mg/kg	150	< 100	< 100	< 100
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	9.1	8.3	8.1	8.1
% Moisture	1	%	29	28	24	24
Arsenic	2	mg/kg	30	21	23	31
Cadmium	1	mg/kg	< 1	< 1	< 1	< 1
Chromium	5	mg/kg	150	130	140	170
Copper	5	mg/kg	75	63	65	80
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	260	190	200	240
Selenium	5	mg/kg	< 5	< 5	< 5	< 5
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	150	120	120	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 (PFTTrDA) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	67	64	65	63
13C5-PFPeA (surr.)	1	%	76	84	72	110
13C5-PFHxA (surr.)	1	%	74	80	74	74

Client Sample ID			SX_IB_202205 19_15_57_SS Primary_EUF	SX_IB_202205 19_15_57_SS Duplicate_EUF	SX_IB_202205 19_20_05_SS Primary_EUF	SX_IB_202205 19_20_05_SS Duplicate_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048423	M22- My0048424	M22- My0048425	M22- My0048426
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	68	77	66	63
13C8-PFOA (surr.)	1	%	66	66	75	54
13C5-PFNA (surr.)	1	%	72	50	62	72
13C6-PFDA (surr.)	1	%	75	82	79	66
13C2-PFUnDA (surr.)	1	%	58	76	70	57
13C2-PFDoDA (surr.)	1	%	83	86	87	85
13C2-PFTEdA (surr.)	1	%	137	116	92	102
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	%	85	79	78	76
D3-N-MeFOSA (surr.)	1	%	90	102	95	91
D5-N-EtFOSA (surr.)	1	%	86	79	77	81
D7-N-MeFOSE (surr.)	1	%	85	86	84	98
D9-N-EtFOSE (surr.)	1	%	82	98	70	91
D5-N-EtFOSAA (surr.)	1	%	80	81	109	112
D3-N-MeFOSAA (surr.)	1	%	105	146	127	105
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	%	80	85	81	86
18O2-PFHxS (surr.)	1	%	75	59	50	91
13C8-PFOS (surr.)	1	%	72	65	68	59
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	79	84	79
13C2-6:2 FTSA (surr.)	1	%	65	62	134	92

Client Sample ID			SX_IB_202205_19_15_57_SS_Primary_EUF	SX_IB_202205_19_15_57_SS_Duplicate_EUF	SX_IB_202205_19_20_05_SS_Primary_EUF	SX_IB_202205_19_20_05_SS_Duplicate_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-My0048423	M22-My0048424	M22-My0048425	M22-My0048426
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
13C2-8:2 FTSA (surr.)	1	%	88	113	123	79
13C2-10:2 FTSA (surr.)	1	%	86	103	117	135
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_519_20_34_SS_Primary_EUF	SX_IB_202205_20_00_05_SS_Primary_EUF	SX_IB_202205_20_04_02_SS_Primary_EUF	SX_IB_202205_20_04_11_SS_Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-My0048427	M22-My0048430	M22-My0048431	M22-My0048432
Date Sampled			May 19, 2022	May 20, 2022	May 20, 2022	May 20, 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	42	24	< 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

Client Sample ID			SX_OB_20220 519_20_34_SS _Primary_EUF	SX_IB_202205 20_00_05_SS _Primary_EUF	SX_IB_202205 20_04_02_SS _Primary_EUF	SX_IB_202205 20_04_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048427	M22- My0048430	M22- My0048431	M22- My0048432
Date Sampled			May 19, 2022	May 20, 2022	May 20, 2022	May 20, 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	%	141	123	90	79
Toluene-d8 (surr.)	1	%	111	129	84	79

Client Sample ID			SX_OB_20220 519_20_34_SS _Primary_EUF	SX_IB_202205 20_00_05_SS _Primary_EUF	SX_IB_202205 20_04_02_SS _Primary_EUF	SX_IB_202205 20_04_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048427	M22- My0048430	M22- My0048431	M22- My0048432
Date Sampled			May 19, 2022	May 20, 2022	May 20, 2022	May 20, 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	%	54	54	58	82
p-Terphenyl-d14 (surr.)	1	%	58	57	97	103
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 519_20_34_SS _Primary_EUF	SX_IB_202205 20_00_05_SS _Primary_EUF	SX_IB_202205 20_04_02_SS _Primary_EUF	SX_IB_202205 20_04_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048427	M22- My0048430	M22- My0048431	M22- My0048432
Date Sampled			May 19, 2022	May 20, 2022	May 20, 2022	May 20, 2022
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dibutylchlorendate (surr.)	1	%	82	74	112	112
Tetrachloro-m-xylene (surr.)	1	%	58	53	109	127
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	%	82	74	112	112
Tetrachloro-m-xylene (surr.)	1	%	58	53	109	127
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	%	50	51	int	75
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Chromium (hexavalent)						
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
Fluoride (Total)	100	mg/kg	< 100	110	< 100	< 100
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.5	8.4	8.7	8.8
% Moisture	1	%	28	31	29	25

Client Sample ID			SX_OB_20220 519_20_34_SS _Primary_EUF	SX_IB_202205 20_00_05_SS _Primary_EUF	SX_IB_202205 20_04_02_SS _Primary_EUF	SX_IB_202205 20_04_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048427	M22- My0048430	M22- My0048431	M22- My0048432
Date Sampled			May 19, 2022	May 20, 2022	May 20, 2022	May 20, 2022
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	55	21	44	36
Cadmium	1	mg/kg	< 1	< 1	< 1	< 1
Chromium	5	mg/kg	100	120	120	160
Copper	5	mg/kg	59	62	55	78
Lead	5	mg/kg	8.5	5.4	6.3	5.3
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	140	190	190	240
Selenium	5	mg/kg	< 5	< 5	< 5	< 5
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	110	120	110	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 (PFTeDA) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	63	65	64	61
13C5-PFPeA (surr.)	1	%	84	82	97	54
13C5-PFHxA (surr.)	1	%	70	75	74	69
13C4-PFHpA (surr.)	1	%	70	67	69	55
13C8-PFOA (surr.)	1	%	69	56	63	54
13C5-PFNA (surr.)	1	%	69	69	74	51
13C6-PFDA (surr.)	1	%	79	93	54	59
13C2-PFUnDA (surr.)	1	%	71	86	68	72
13C2-PFDoDA (surr.)	1	%	75	82	74	73
13C2-PFTeDA (surr.)	1	%	101	128	95	70
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	%	79	77	75	72
D3-N-MeFOSA (surr.)	1	%	99	86	108	76

Client Sample ID			SX_OB_20220 519_20_34_SS _Primary_EUF	SX_IB_202205 20_00_05_SS _Primary_EUF	SX_IB_202205 20_04_02_SS _Primary_EUF	SX_IB_202205 20_04_11_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- My0048427	M22- My0048430	M22- My0048431	M22- My0048432
Date Sampled			May 19, 2022	May 20, 2022	May 20, 2022	May 20, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D5-N-EtFOSA (surr.)	1	%	78	86	83	68
D7-N-MeFOSE (surr.)	1	%	92	93	101	64
D9-N-EtFOSE (surr.)	1	%	79	73	69	59
D5-N-EtFOSAA (surr.)	1	%	87	90	111	73
D3-N-MeFOSAA (surr.)	1	%	82	92	83	87
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	66	97	76
18O2-PFHxS (surr.)	1	%	53	58	60	57
13C8-PFOS (surr.)	1	%	63	60	62	69
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	%	70	77	77	69
13C2-6:2 FTSA (surr.)	1	%	47	52	51	94
13C2-8:2 FTSA (surr.)	1	%	92	81	78	92
13C2-10:2 FTSA (surr.)	1	%	90	68	96	84
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 20, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 20, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 20, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	May 20, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	May 20, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 20, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	May 20, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	May 20, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 20, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 20, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	May 20, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	May 23, 2022	14 Days
Fluoride (Total) - Method: LTM-INO-4150 Determination of Total Fluoride PART B – ISE	Melbourne	May 21, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	May 20, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	May 20, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	May 20, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 26, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 26, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	

Repeat Samples

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 20, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 20, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 20, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	May 20, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	May 20, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 20, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	May 20, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	May 20, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 20, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 20, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	May 20, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	May 23, 2022	14 Days
Fluoride (Total) - Method: LTM-INO-4150 Determination of Total Fluoride PART B – ISE	Melbourne	May 21, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	May 20, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	May 20, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	May 20, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 26, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 26, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	

Company Name: Agon Environmental Pty Ltd - VIC
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063
Project Name: 20220520044241-Eurofin-52
Project ID: JC0927

Order No.:
Report #: 890217
Phone: 08 8338 1009
Fax:

Received: May 20, 2022 11:30 AM
Due: May 27, 2022
Priority: 5 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_OB_20220519_08_01_S_S_Triplicate_EUF	May 19, 2022	8:01AM	Soil	M22-My0048417		X	X	X
2	SX_IB_20220519_08_09_SS_Primary_EUF	May 19, 2022	8:09AM	Soil	M22-My0048418		X	X	X
3	SX_IB_20220519_08_45_SR_Rinsate_EUF	May 19, 2022	8:45AM	Water	M22-My0048419			X	
4	SX_IB_20220519_08_46_SB	May 19, 2022	8:46AM	Water	M22-My0048420			X	

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Project Name:	20220520044241-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									
	Blank_EUF								
5	SX_IB_20220519_11_52_SS_Primary_EUF	May 19, 2022	12:03PM	Soil	M22-My0048421		X	X	X
6	SX_OB_20220519_12_03_SS_Primary_EUF	May 19, 2022	12:03PM	Soil	M22-My0048422		X	X	X
7	SX_IB_20220519_15_57_SS_Primary_EUF	May 19, 2022	3:57PM	Soil	M22-My0048423		X	X	X
8	SX_IB_20220519_15_57_SS_Duplicate_EU	May 19, 2022	3:57PM	Soil	M22-My0048424		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									
	_Duplicate_EU F								
9	SX_IB_20220519_20_05_SS_Primary_EUF	May 19, 2022	8:05PM	Soil	M22-My0048425		X	X	X
10	SX_IB_20220519_20_05_SS_Duplicate_EUF	May 19, 2022	8:05PM	Soil	M22-My0048426		X	X	X
11	SX_OB_20220519_20_34_SS_Primary_EUF	May 19, 2022	8:34PM	Soil	M22-My0048427		X	X	X
12	SX_IB_202205	May 19, 2022	8:35PM	Water	M22-			X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 20, 2022 11:30 AM
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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									
	19_20_35_SR_Rinsate_EUF				My0048428				
13	SX_IB_20220519_20_36_SB_Blank_EUF	May 19, 2022	8:36PM	Water	M22-My0048429		X		
14	SX_IB_20220520_00_05_SS_Primary_EUF	May 20, 2022	12:05AM	Soil	M22-My0048430		X	X	X
15	SX_IB_20220520_04_02_SS_Primary_EUF	May 20, 2022	4:02AM	Soil	M22-My0048431		X	X	X
16	SX_IB_20220520_04_11_SS_Primary_EUF	May 20, 2022	4:11AM	Soil	M22-My0048432		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									
17	SX_OB_20220519_08_01_S_S_Triplicate_EUF	May 19, 2022	8:01AM	AUS Leachate - pH 5.0	M22-My0048433	X		X	
18	SX_IB_20220519_08_09_SS_Primary_EUF	May 19, 2022	8:09AM	AUS Leachate - pH 5.0	M22-My0048434	X		X	
19	SX_IB_20220519_11_52_SS_Primary_EUF	May 19, 2022	12:03PM	AUS Leachate - pH 5.0	M22-My0048435	X		X	
20	SX_OB_20220519_12_03_S_S_Primary_EUF	May 19, 2022	12:03PM	AUS Leachate - pH 5.0	M22-My0048436	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									
21	SX_IB_20220519_15_57_SS_Primary_EUF	May 19, 2022	3:57PM	AUS Leachate - pH 5.0	M22-My0048437	X		X	
22	SX_IB_20220519_15_57_SS_Duplicate_EUF	May 19, 2022	3:57PM	AUS Leachate - pH 5.0	M22-My0048438	X		X	
23	SX_IB_20220519_20_05_SS_Primary_EUF	May 19, 2022	8:05PM	AUS Leachate - pH 5.0	M22-My0048439	X		X	
24	SX_IB_20220519_20_05_SS_Duplicate_EUF	May 19, 2022	8:05PM	AUS Leachate - pH 5.0	M22-My0048440	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									
25	SX_OB_20220519_20_34_S_S_Primary_EUF	May 19, 2022	8:34PM	AUS Leachate - pH 5.0	M22-My0048441	X		X	
26	SX_IB_20220520_00_05_SS_Primary_EUF	May 20, 2022	12:05AM	AUS Leachate - pH 5.0	M22-My0048442	X		X	
27	SX_IB_20220520_04_02_SS_Primary_EUF	May 20, 2022	4:02AM	AUS Leachate - pH 5.0	M22-My0048443	X		X	
28	SX_IB_20220520_04_11_SS_Primary_EUF	May 20, 2022	4:11AM	AUS Leachate - pH 5.0	M22-My0048444	X		X	
29	SX_OB_20220519_20_34_S_S_Primary_EUF	May 19, 2022	8:01AM	AUS Leachate	M22-	X		X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 20, 2022 11:30 AM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	890217	Due:	May 27, 2022
Project Name:	20220520044241-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									
	519_08_01_S S_Triplicate_E UF			- Reagent Water	My0048445				
30	SX_IB_202205 19_08_09_SS _Primary_EUF	May 19, 2022	8:09AM	AUS Leachate - Reagent Water	M22- My0048446	X		X	
31	SX_IB_202205 19_11_52_SS _Primary_EUF	May 19, 2022	12:03PM	AUS Leachate - Reagent Water	M22- My0048447	X		X	
32	SX_OB_20220 519_12_03_S S_Primary_EU F	May 19, 2022	12:03PM	AUS Leachate - Reagent Water	M22- My0048448	X		X	
33	SX_IB_202205	May 19, 2022	3:57PM	AUS Leachate	M22-	X		X	

Company Name: Agon Environmental Pty Ltd - VIC
Address: 3/224 Glen Osmond Road
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Received: May 20, 2022 11:30 AM
Due: May 27, 2022
Priority: 5 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
33	SX_IB_20220519_15_57_SS_Primary_EUF	May 19, 2022	3:57PM	AUS Leachate - Reagent Water	M22-My0048449				
34	SX_IB_20220519_15_57_SS_Duplicate_EUF	May 19, 2022	3:57PM	AUS Leachate - Reagent Water	M22-My0048450	X		X	
35	SX_IB_20220519_20_05_SS_Primary_EUF	May 19, 2022	8:05PM	AUS Leachate - Reagent Water	M22-My0048451	X		X	
36	SX_IB_20220519_20_05_SS_Duplicate_EUF	May 19, 2022	8:05PM	AUS Leachate - Reagent Water	M22-My0048452	X		X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 20, 2022 11:30 AM
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Project Name:	20220520044241-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									
37	SX_OB_20220519_20_34_S_S_Primary_EUF	May 19, 2022	8:34PM	AUS Leachate - Reagent Water	M22-My0048453	X		X	
38	SX_IB_20220520_00_05_SS_Primary_EUF	May 20, 2022	12:05AM	AUS Leachate - Reagent Water	M22-My0048454	X		X	
39	SX_IB_20220520_04_02_SS_Primary_EUF	May 20, 2022	4:02AM	AUS Leachate - Reagent Water	M22-My0048455	X		X	
40	SX_IB_20220520_04_11_SS_Primary_EUF	May 20, 2022	4:11AM	AUS Leachate - Reagent Water	M22-My0048456	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	< 1			1	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Molybdenum	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 5			5	Pass	
Silver	mg/kg	< 2			2	Pass	
Tin	mg/kg	< 10			10	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Zinc	mg/kg	< 5			5	Pass	
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	%	113			70-130	Pass	
TRH C10-C14	%	99			70-130	Pass	
Naphthalene	%	72			70-130	Pass	
TRH C6-C10	%	111			70-130	Pass	
TRH >C10-C16	%	95			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	110			70-130	Pass	
1.1.1-Trichloroethane	%	94			70-130	Pass	
1.2-Dichlorobenzene	%	101			70-130	Pass	
1.2-Dichloroethane	%	119			70-130	Pass	
Benzene	%	96			70-130	Pass	
Ethylbenzene	%	93			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	88			70-130	Pass	
Toluene	%	88			70-130	Pass	
Trichloroethene	%	103			70-130	Pass	
Xylenes - Total*	%	89			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	97			70-130	Pass	
Acenaphthylene	%	110			70-130	Pass	
Anthracene	%	95			70-130	Pass	
Benz(a)anthracene	%	78			70-130	Pass	
Benzo(a)pyrene	%	99			70-130	Pass	
Benzo(b&i)fluoranthene	%	93			70-130	Pass	
Benzo(g,h,i)perylene	%	83			70-130	Pass	
Benzo(k)fluoranthene	%	108			70-130	Pass	
Chrysene	%	107			70-130	Pass	
Dibenz(a,h)anthracene	%	81			70-130	Pass	
Fluoranthene	%	106			70-130	Pass	
Fluorene	%	103			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	79			70-130	Pass	
Naphthalene	%	100			70-130	Pass	
Phenanthrene	%	91			70-130	Pass	
Pyrene	%	106			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	81			70-130	Pass	
4,4'-DDD	%	83			70-130	Pass	
4,4'-DDE	%	82			70-130	Pass	
4,4'-DDT	%	82			70-130	Pass	
a-HCH	%	88			70-130	Pass	
Aldrin	%	81			70-130	Pass	
b-HCH	%	101			70-130	Pass	
d-HCH	%	110			70-130	Pass	
Dieldrin	%	82			70-130	Pass	
Endosulfan I	%	82			70-130	Pass	
Endosulfan II	%	80			70-130	Pass	
Endosulfan sulphate	%	73			70-130	Pass	
Endrin	%	79			70-130	Pass	
Endrin aldehyde	%	83			70-130	Pass	
Endrin ketone	%	80			70-130	Pass	
g-HCH (Lindane)	%	108			70-130	Pass	
Heptachlor	%	82			70-130	Pass	
Heptachlor epoxide	%	82			70-130	Pass	
Hexachlorobenzene	%	84			70-130	Pass	
Methoxychlor	%	100			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	88			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	89			25-140	Pass	
2,4-Dichlorophenol	%	115			25-140	Pass	
2,4,5-Trichlorophenol	%	114			25-140	Pass	
2,4,6-Trichlorophenol	%	94			25-140	Pass	
2,6-Dichlorophenol	%	71			25-140	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
4-Chloro-3-methylphenol	%	93		25-140	Pass	
Pentachlorophenol	%	77		25-140	Pass	
Tetrachlorophenols - Total	%	83		25-140	Pass	
LCS - % Recovery						
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	%	35		25-140	Pass	
2-Methyl-4,6-dinitrophenol	%	49		25-140	Pass	
2-Nitrophenol	%	98		25-140	Pass	
2,4-Dimethylphenol	%	67		25-140	Pass	
2,4-Dinitrophenol	%	82		25-140	Pass	
2-Methylphenol (o-Cresol)	%	78		25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	99		25-140	Pass	
4-Nitrophenol	%	97		25-140	Pass	
Dinoseb	%	40		25-140	Pass	
Phenol	%	96		25-140	Pass	
LCS - % Recovery						
Chromium (hexavalent)	%	74		70-130	Pass	
Cyanide (total)	%	103		70-130	Pass	
Fluoride (Total)	%	84		70-130	Pass	
LCS - % Recovery						
Heavy Metals						
Arsenic	%	104		80-120	Pass	
Cadmium	%	108		80-120	Pass	
Chromium	%	104		80-120	Pass	
Copper	%	104		80-120	Pass	
Lead	%	111		80-120	Pass	
Mercury	%	104		80-120	Pass	
Molybdenum	%	104		80-120	Pass	
Nickel	%	100		80-120	Pass	
Selenium	%	103		80-120	Pass	
Silver	%	105		80-120	Pass	
Tin	%	102		80-120	Pass	
Zinc	%	114		80-120	Pass	
LCS - % Recovery						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	%	61		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	61		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	60		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	59		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	61		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	61		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	63		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	65		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	63		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	53		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	58		50-150	Pass	
LCS - % Recovery						
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)	%	53		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	62		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	63		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	60		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	61		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	56		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	54			50-150	Pass		
LCS - % Recovery								
Perfluoroalkyl sulfonic acids (PFASs)								
Perfluorobutanesulfonic acid (PFBS)	%	58			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	57			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	59			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	58			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	59			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	56			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	60			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	55			50-150	Pass		
LCS - % Recovery								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	63			50-150	Pass		
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	61			50-150	Pass		
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	76			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	59			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 C6-C9	M22-My0053197	NCP	%	100		70-130	Pass	
TRH C10-C14	M22-My0043949	NCP	%	100		70-130	Pass	
Naphthalene	M22-My0053197	NCP	%	78		70-130	Pass	
TRH C6-C10	M22-My0053197	NCP	%	100		70-130	Pass	
TRH >C10-C16	M22-My0043949	NCP	%	96		70-130	Pass	
Spike - % Recovery								
Volatile Organics				Result 1				
1.1-Dichloroethene	M22-My0053197	NCP	%	101		70-130	Pass	
1.1.1-Trichloroethane	M22-My0053197	NCP	%	89		70-130	Pass	
1.2-Dichlorobenzene	M22-My0053197	NCP	%	100		70-130	Pass	
1.2-Dichloroethane	M22-My0053197	NCP	%	106		70-130	Pass	
Benzene	M22-My0053197	NCP	%	92		70-130	Pass	
Ethylbenzene	M22-My0053197	NCP	%	89		70-130	Pass	
m&p-Xylenes	M22-My0053197	NCP	%	85		70-130	Pass	
o-Xylene	M22-My0053197	NCP	%	86		70-130	Pass	
Trichloroethene	M22-My0053197	NCP	%	98		70-130	Pass	
Xylenes - Total*	M22-My0053197	NCP	%	85		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	M22-My0044147	NCP	%	87		70-130	Pass	
Acenaphthylene	M22-My0044147	NCP	%	83		70-130	Pass	
Anthracene	M22-My0044147	NCP	%	77		70-130	Pass	
Benz(a)anthracene	M22-My0044147	NCP	%	86		70-130	Pass	
Benzo(a)pyrene	M22-My0044147	NCP	%	88		70-130	Pass	
Benzo(b&j)fluoranthene	M22-My0044147	NCP	%	83		70-130	Pass	
Benzo(g,h,i)perylene	M22-My0044147	NCP	%	115		70-130	Pass	
Benzo(k)fluoranthene	M22-My0044147	NCP	%	127		70-130	Pass	
Chrysene	M22-My0044147	NCP	%	106		70-130	Pass	
Dibenz(a,h)anthracene	M22-My0044147	NCP	%	99		70-130	Pass	
Fluoranthene	M22-My0044147	NCP	%	83		70-130	Pass	
Fluorene	M22-My0044147	NCP	%	85		70-130	Pass	
Indeno(1,2,3-cd)pyrene	M22-My0044147	NCP	%	77		70-130	Pass	
Naphthalene	M22-My0044147	NCP	%	79		70-130	Pass	
Phenanthrene	M22-My0044147	NCP	%	85		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Pyrene	M22-My0044147	NCP	%	79		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	M22-My0046540	NCP	%	104		70-130	Pass	
4.4'-DDD	M22-My0046540	NCP	%	107		70-130	Pass	
4.4'-DDE	M22-My0046540	NCP	%	95		70-130	Pass	
4.4'-DDT	M22-My0046540	NCP	%	117		70-130	Pass	
a-HCH	M22-My0046540	NCP	%	104		70-130	Pass	
Aldrin	M22-My0046540	NCP	%	84		70-130	Pass	
b-HCH	M22-My0046540	NCP	%	106		70-130	Pass	
d-HCH	M22-My0046540	NCP	%	102		70-130	Pass	
Dieldrin	M22-My0046540	NCP	%	104		70-130	Pass	
Endosulfan I	M22-My0046540	NCP	%	113		70-130	Pass	
Endosulfan II	M22-My0046540	NCP	%	92		70-130	Pass	
Endosulfan sulphate	M22-My0046540	NCP	%	101		70-130	Pass	
Endrin	M22-My0046540	NCP	%	88		70-130	Pass	
Endrin aldehyde	M22-My0046540	NCP	%	90		70-130	Pass	
Endrin ketone	M22-My0046540	NCP	%	127		70-130	Pass	
g-HCH (Lindane)	M22-My0046540	NCP	%	115		70-130	Pass	
Heptachlor	M22-My0046540	NCP	%	103		70-130	Pass	
Heptachlor epoxide	M22-My0046540	NCP	%	100		70-130	Pass	
Hexachlorobenzene	M22-My0046540	NCP	%	84		70-130	Pass	
Methoxychlor	M22-My0046540	NCP	%	111		70-130	Pass	
Spike - % Recovery								
Phenols (Halogenated)				Result 1				
2-Chlorophenol	M22-My0044147	NCP	%	76		30-130	Pass	
2,4-Dichlorophenol	M22-My0044147	NCP	%	64		30-130	Pass	
2,4,5-Trichlorophenol	M22-My0028305	NCP	%	40		30-130	Pass	
2,4,6-Trichlorophenol	M22-My0044147	NCP	%	70		30-130	Pass	
2,6-Dichlorophenol	M22-My0044147	NCP	%	66		30-130	Pass	
4-Chloro-3-methylphenol	M22-My0044147	NCP	%	78		30-130	Pass	
Pentachlorophenol	M22-My0044147	NCP	%	58		30-130	Pass	
Tetrachlorophenols - Total	M22-My0044147	NCP	%	47		30-130	Pass	
Spike - % Recovery								
Phenols (non-Halogenated)				Result 1				
2-Cyclohexyl-4,6-dinitrophenol	M22-My0044147	NCP	%	52		30-130	Pass	
2-Methyl-4,6-dinitrophenol	M22-My0044147	NCP	%	44		30-130	Pass	
2-Nitrophenol	M22-My0044147	NCP	%	85		30-130	Pass	
2,4-Dimethylphenol	M22-My0044147	NCP	%	65		30-130	Pass	
2-Methylphenol (o-Cresol)	M22-My0044147	NCP	%	58		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-My0044147	NCP	%	79		30-130	Pass	
4-Nitrophenol	M22-My0044147	NCP	%	35		30-130	Pass	
Dinoseb	M22-My0044147	NCP	%	76		30-130	Pass	
Phenol	M22-My0044147	NCP	%	80		30-130	Pass	
Spike - % Recovery								
				Result 1				
Cyanide (total)	M22-My0043543	NCP	%	98		70-130	Pass	
Fluoride (Total)	R22-My0028800	NCP	%	97		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	M22-My0043925	NCP	%	101		75-125	Pass	
Cadmium	M22-My0043925	NCP	%	104		75-125	Pass	
Chromium	M22-My0043925	NCP	%	99		75-125	Pass	
Copper	M22-My0043925	NCP	%	106		75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Lead	M22-My0049921	NCP	%	105		75-125	Pass	
Mercury	M22-My0043925	NCP	%	108		75-125	Pass	
Molybdenum	M22-My0043925	NCP	%	108		75-125	Pass	
Nickel	M22-My0043925	NCP	%	99		75-125	Pass	
Selenium	M22-My0043925	NCP	%	101		75-125	Pass	
Silver	M22-My0043925	NCP	%	104		75-125	Pass	
Tin	M22-My0043925	NCP	%	113		75-125	Pass	
Zinc	M22-My0049921	NCP	%	87		75-125	Pass	
Spike - % Recovery								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1				
Perfluorobutanoic acid (PFBA)	M22-My0044595	NCP	%	92		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-My0044595	NCP	%	56		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-My0044595	NCP	%	82		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-My0044595	NCP	%	104		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-My0044595	NCP	%	91		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-My0044595	NCP	%	86		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-My0044595	NCP	%	108		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-My0044595	NCP	%	98		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-My0044595	NCP	%	97		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-My0044595	NCP	%	63		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-My0044595	NCP	%	108		50-150	Pass	
Spike - % Recovery								
Perfluoroalkyl sulfonamido substances				Result 1				
Perfluorooctane sulfonamide (FOSA)	M22-My0044595	NCP	%	81		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0044595	NCP	%	73		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0044595	NCP	%	77		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0044595	NCP	%	82		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0044595	NCP	%	87		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-My0044595	NCP	%	99		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0044595	NCP	%	62		50-150	Pass	
Spike - % Recovery								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1				
Perfluorobutanesulfonic acid (PFBS)	M22-My0044595	NCP	%	89		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-My0044595	NCP	%	121		50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-My0044595	NCP	%	83		50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-My0044595	NCP	%	119		50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0044595	NCP	%	83		50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-My0044595	NCP	%	66		50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-My0044595	NCP	%	73		50-150	Pass	
Spike - % Recovery								

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-My0044595	NCP	%	91			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0044595	NCP	%	88			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0044595	NCP	%	79			50-150	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&i)fluoranthene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M22-My0046353	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4,4'-DDD	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDE	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDT	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M22-My0046353	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M22-My0046353	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-My0046353	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-My0046353	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-My0046353	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-My0046353	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-My0046353	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-My0046353	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-My0046353	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M22-My0046353	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M22-My0046353	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-My0046353	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-My0046353	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-My0046353	NCP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	M22-My0046353	NCP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M22-My0046353	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-My0046353	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	M22-My0046353	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-My0046353	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-My0046353	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M22-My0046353	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-My0046353	NCP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-My0046353	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-My0058118	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Cyanide (total)	M22-My0043884	NCP	mg/kg	< 5	< 5	<1	30%	Pass
pH (1:5 Aqueous extract at 25°C as rec.)	M22-My0045980	NCP	pH Units	4.2	5.1	pass	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M22-My0043950	NCP	mg/kg	130	130	2.0	30%	Pass
Cadmium	M22-My0043950	NCP	mg/kg	30	31	2.0	30%	Pass
Chromium	M22-My0043950	NCP	mg/kg	40	40	<1	30%	Pass
Copper	M22-My0043950	NCP	mg/kg	330	330	<1	30%	Pass
Lead	M22-My0049920	NCP	mg/kg	8.6	8.6	<1	30%	Pass
Mercury	M22-My0043950	NCP	mg/kg	1.9	1.9	1.0	30%	Pass
Molybdenum	M22-My0043950	NCP	mg/kg	32	32	2.0	30%	Pass
Nickel	M22-My0043950	NCP	mg/kg	22	23	3.0	30%	Pass
Selenium	M22-My0043950	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M22-My0043950	NCP	mg/kg	17	18	1.0	30%	Pass
Tin	M22-My0043950	NCP	mg/kg	21	21	1.0	30%	Pass
Zinc	M22-My0043950	NCP	mg/kg	8900	9000	1.0	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	M22-My0048421	CP	%	29	27	8.0	30%	Pass

Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C6-C9	M22-My0048424	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C10-C14	M22-My0048424	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M22-My0048424	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M22-My0048424	CP	mg/kg	< 50	< 50	<1	30%	Pass
Naphthalene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	M22-My0048424	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH >C10-C16	M22-My0048424	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M22-My0048424	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M22-My0048424	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Hexachlorobutadiene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.1-Dichloroethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trichlorobenzene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1-Dichloroethene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1-Trichloroethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1.2-Tetrachloroethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2-Trichloroethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2.2-Tetrachloroethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dibromoethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichlorobenzene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloroethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloropropane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.3-Trichloropropane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trimethylbenzene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichlorobenzene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichloropropane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3.5-Trimethylbenzene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.4-Dichlorobenzene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzene	M22-My0048424	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Bromobenzene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	M22-My0048424	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Iodomethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	M22-My0048424	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	M22-My0048424	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	M22-My0048424	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1,2-Dichloroethene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,3-Dichloropropene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-My0048424	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total*	M22-My0048424	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-My0048430	CP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-My0048430	CP	ug/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass

Duplicate								
Perfluoroalkyl sulfonic acids (PFASs)				Result 1	Result 2	RPD		
Perfluorohexanesulfonic acid (PFHxS)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-My0048430	CP	ug/kg	< 10	< 10	<1	30%	Pass
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
1H,1H,2H,2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-My0048430	CP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Fluoride (Total)	M22-My0048431	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C6-C9	M22-My0048432	CP	mg/kg	< 20	< 20	<1	30%	Pass
Naphthalene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	M22-My0048432	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Hexachlorobutadiene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1,1-Dichloroethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,4-Trichlorobenzene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1-Dichloroethene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,1-Trichloroethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,1,2-Tetrachloroethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,2-Trichloroethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,2,2-Tetrachloroethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dibromoethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dichlorobenzene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dichloroethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dichloropropane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,3-Trichloropropane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,4-Trimethylbenzene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3-Dichlorobenzene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3-Dichloropropane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3,5-Trimethylbenzene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,4-Dichlorobenzene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzene	M22-My0048432	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Bromobenzene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	M22-My0048432	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	M22-My0048432	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	M22-My0048432	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	M22-My0048432	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1.2-Dichloroethene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.3-Dichloropropene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-My0048432	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total*	M22-My0048432	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

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



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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NATA Accredited
Accreditation Number 1261
Site Number 1254

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

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

Report **890217-W**
Project name **20220520044241-Eurofin-52**
Project ID **JC0927**
Received Date **May 20, 2022**

Client Sample ID			SX_IB_202205 19_08_45_SR_ Rinsate_EUF	SX_IB_202205 19_08_46_SB_ Blank_EUF	SX_IB_202205 19_20_35_SR_ Rinsate_EUF	SX_IB_202205 19_20_36_SB_ Blank_EUF
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M22- My0048419	M22- My0048420	M22- My0048428	M22- My0048429
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 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	%	73	72	67	73
13C5-PFPeA (surr.)	1	%	80	74	63	81
13C5-PFHxA (surr.)	1	%	82	81	76	86
13C4-PFHpA (surr.)	1	%	67	64	58	61
13C8-PFOA (surr.)	1	%	80	58	56	82
13C5-PFNA (surr.)	1	%	64	65	56	59
13C6-PFDA (surr.)	1	%	58	52	56	68
13C2-PFUnDA (surr.)	1	%	56	61	59	51
13C2-PFDoDA (surr.)	1	%	79	69	69	66
13C2-PFTeDA (surr.)	1	%	69	60	57	59
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	%	78	68	75	79

Client Sample ID			SX_IB_202205 19_08_45_SR_ Rinsate_EUF	SX_IB_202205 19_08_46_SB_ Blank_EUF	SX_IB_202205 19_20_35_SR_ Rinsate_EUF	SX_IB_202205 19_20_36_SB_ Blank_EUF
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M22- My0048419	M22- My0048420	M22- My0048428	M22- My0048429
Date Sampled			May 19, 2022	May 19, 2022	May 19, 2022	May 19, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D3-N-MeFOSA (surr.)	1	%	69	52	57	58
D5-N-EtFOSA (surr.)	1	%	71	46	56	60
D7-N-MeFOSE (surr.)	1	%	77	78	81	76
D9-N-EtFOSE (surr.)	1	%	88	77	75	83
D5-N-EtFOSAA (surr.)	1	%	68	54	45	56
D3-N-MeFOSAA (surr.)	1	%	59	78	54	74
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	%	72	69	60	65
18O2-PFHxS (surr.)	1	%	53	53	60	67
13C8-PFOS (surr.)	1	%	70	64	70	65
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	%	61	66	61	64
13C2-6:2 FTSA (surr.)	1	%	54	54	50	39
13C2-8:2 FTSA (surr.)	1	%	52	53	38	51
13C2-10:2 FTSA (surr.)	1	%	52	65	65	60
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) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	May 20, 2022	

Company Name: Agon Environmental Pty Ltd - VIC
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063
Project Name: 20220520044241-Eurofin-52
Project ID: JC0927

Order No.:
Report #: 890217
Phone: 08 8338 1009
Fax:

Received: May 20, 2022 11:30 AM
Due: May 27, 2022
Priority: 5 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_OB_20220519_08_01_S_S_Triplicate_EUF	May 19, 2022	8:01AM	Soil	M22-My0048417		X	X	X
2	SX_IB_20220519_08_09_SS_Primary_EUF	May 19, 2022	8:09AM	Soil	M22-My0048418		X	X	X
3	SX_IB_20220519_08_45_SR_Rinsate_EUF	May 19, 2022	8:45AM	Water	M22-My0048419			X	
4	SX_IB_20220519_08_46_SB	May 19, 2022	8:46AM	Water	M22-My0048420			X	

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Project Name:	20220520044241-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									
	Blank_EUF								
5	SX_IB_20220519_11_52_SS_Primary_EUF	May 19, 2022	12:03PM	Soil	M22-My0048421		X	X	X
6	SX_OB_20220519_12_03_SS_Primary_EUF	May 19, 2022	12:03PM	Soil	M22-My0048422		X	X	X
7	SX_IB_20220519_15_57_SS_Primary_EUF	May 19, 2022	3:57PM	Soil	M22-My0048423		X	X	X
8	SX_IB_20220519_15_57_SS_Duplicate_EU	May 19, 2022	3:57PM	Soil	M22-My0048424		X	X	X

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Project Name:	20220520044241-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									
	_Duplicate_EU F								
9	SX_IB_20220519_20_05_SS_Primary_EUF	May 19, 2022	8:05PM	Soil	M22-My0048425		X	X	X
10	SX_IB_20220519_20_05_SS_Duplicate_EUF	May 19, 2022	8:05PM	Soil	M22-My0048426		X	X	X
11	SX_OB_20220519_20_34_SS_Primary_EUF	May 19, 2022	8:34PM	Soil	M22-My0048427		X	X	X
12	SX_IB_202205	May 19, 2022	8:35PM	Water	M22-			X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 20, 2022 11:30 AM
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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									
	19_20_35_SR_Rinsate_EUF				My0048428				
13	SX_IB_20220519_20_36_SB_Blank_EUF	May 19, 2022	8:36PM	Water	M22-My0048429		X		
14	SX_IB_20220520_00_05_SS_Primary_EUF	May 20, 2022	12:05AM	Soil	M22-My0048430		X	X	X
15	SX_IB_20220520_04_02_SS_Primary_EUF	May 20, 2022	4:02AM	Soil	M22-My0048431		X	X	X
16	SX_IB_20220520_04_11_SS_Primary_EUF	May 20, 2022	4:11AM	Soil	M22-My0048432		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									
17	SX_OB_20220519_08_01_S_S_Triplicate_EUF	May 19, 2022	8:01AM	AUS Leachate - pH 5.0	M22-My0048433	X		X	
18	SX_IB_20220519_08_09_SS_Primary_EUF	May 19, 2022	8:09AM	AUS Leachate - pH 5.0	M22-My0048434	X		X	
19	SX_IB_20220519_11_52_SS_Primary_EUF	May 19, 2022	12:03PM	AUS Leachate - pH 5.0	M22-My0048435	X		X	
20	SX_OB_20220519_12_03_S_S_Primary_EUF	May 19, 2022	12:03PM	AUS Leachate - pH 5.0	M22-My0048436	X		X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 20, 2022 11:30 AM
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Project Name:	20220520044241-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									
21	SX_IB_20220519_15_57_SS_Primary_EUF	May 19, 2022	3:57PM	AUS Leachate - pH 5.0	M22-My0048437	X		X	
22	SX_IB_20220519_15_57_SS_Duplicate_EUF	May 19, 2022	3:57PM	AUS Leachate - pH 5.0	M22-My0048438	X		X	
23	SX_IB_20220519_20_05_SS_Primary_EUF	May 19, 2022	8:05PM	AUS Leachate - pH 5.0	M22-My0048439	X		X	
24	SX_IB_20220519_20_05_SS_Duplicate_EUF	May 19, 2022	8:05PM	AUS Leachate - pH 5.0	M22-My0048440	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									
25	SX_OB_20220519_20_34_S_S_Primary_EUF	May 19, 2022	8:34PM	AUS Leachate - pH 5.0	M22-My0048441	X		X	
26	SX_IB_20220520_00_05_SS_Primary_EUF	May 20, 2022	12:05AM	AUS Leachate - pH 5.0	M22-My0048442	X		X	
27	SX_IB_20220520_04_02_SS_Primary_EUF	May 20, 2022	4:02AM	AUS Leachate - pH 5.0	M22-My0048443	X		X	
28	SX_IB_20220520_04_11_SS_Primary_EUF	May 20, 2022	4:11AM	AUS Leachate - pH 5.0	M22-My0048444	X		X	
29	SX_OB_20220	May 19, 2022	8:01AM	AUS Leachate	M22-	X		X	

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Project Name:	20220520044241-Eurofin-52	Phone:	08 8338 1009	Priority:	5 Day
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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									
	519_08_01_S S_Triplicate_E UF			- Reagent Water	My0048445				
30	SX_IB_202205 19_08_09_SS _Primary_EUF	May 19, 2022	8:09AM	AUS Leachate - Reagent Water	M22- My0048446	X		X	
31	SX_IB_202205 19_11_52_SS _Primary_EUF	May 19, 2022	12:03PM	AUS Leachate - Reagent Water	M22- My0048447	X		X	
32	SX_OB_20220 519_12_03_S S_Primary_EU F	May 19, 2022	12:03PM	AUS Leachate - Reagent Water	M22- My0048448	X		X	
33	SX_IB_202205	May 19, 2022	3:57PM	AUS Leachate	M22-	X		X	

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Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	890217	Due:	May 27, 2022
Project Name:	20220520044241-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									
33	SX_IB_20220519_15_57_SS_Primary_EUF	May 19, 2022	3:57PM	AUS Leachate - Reagent Water	M22-My0048449				
34	SX_IB_20220519_15_57_SS_Duplicate_EUF	May 19, 2022	3:57PM	AUS Leachate - Reagent Water	M22-My0048450	X		X	
35	SX_IB_20220519_20_05_SS_Primary_EUF	May 19, 2022	8:05PM	AUS Leachate - Reagent Water	M22-My0048451	X		X	
36	SX_IB_20220519_20_05_SS_Duplicate_EUF	May 19, 2022	8:05PM	AUS Leachate - Reagent Water	M22-My0048452	X		X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	May 20, 2022 11:30 AM
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Project Name:	20220520044241-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									
37	SX_OB_20220519_20_34_S_S_Primary_EUF	May 19, 2022	8:34PM	AUS Leachate - Reagent Water	M22-My0048453	X		X	
38	SX_IB_20220520_00_05_SS_Primary_EUF	May 20, 2022	12:05AM	AUS Leachate - Reagent Water	M22-My0048454	X		X	
39	SX_IB_20220520_04_02_SS_Primary_EUF	May 20, 2022	4:02AM	AUS Leachate - Reagent Water	M22-My0048455	X		X	
40	SX_IB_20220520_04_11_SS_Primary_EUF	May 20, 2022	4:11AM	AUS Leachate - Reagent Water	M22-My0048456	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)	%	110		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	128		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	135		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	129		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	137		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	98		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	98		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	113		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	112		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	115		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)	%	90			50-150	Pass			
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	124			50-150	Pass			
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	103			50-150	Pass			
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	98			50-150	Pass			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	97			50-150	Pass			
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	90			50-150	Pass			
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	102			50-150	Pass			
LCS - % Recovery									
Perfluoroalkyl sulfonic acids (PFSA)									
Perfluorobutanesulfonic acid (PFBS)	%	84			50-150	Pass			
Perfluorononanesulfonic acid (PFNS)	%	105			50-150	Pass			
Perfluoropropanesulfonic acid (PFPrS)	%	108			50-150	Pass			
Perfluoropentanesulfonic acid (PFPeS)	%	124			50-150	Pass			
Perfluorohexanesulfonic acid (PFHxS)	%	106			50-150	Pass			
Perfluoroheptanesulfonic acid (PFHpS)	%	84			50-150	Pass			
Perfluorooctanesulfonic acid (PFOS)	%	81			50-150	Pass			
Perfluorodecanesulfonic acid (PFDS)	%	87			50-150	Pass			
LCS - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	119			50-150	Pass			
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	122			50-150	Pass			
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	102			50-150	Pass			
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	85			50-150	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorooctanoic acid (PFOA)	M22-My0049203	NCP	ug/L	0.21	0.18	17	30%	Pass	

Comments
Sample Integrity

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

Qualifier Codes/Comments

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

Authorised by:

Catherine Wilson	Analytical Services Manager
Joseph Edouard	Senior Analyst-PFAS



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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CHAIN OF CUSTODY RECORD

Eurofins | Environment Testing | AGN 50 065 085 521

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

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

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

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

Company		AGON Environmental - Tunnel Spoil Testing		Project No		JC0927		Project Manager		Craig Trimbur		Sampler(s)		Will-Agon							
Address		Unit H76, 63-85 Turner St, Port Melbourne VIC 3207		Project Name		20220605191054-Eurofin-8		EDD Format		ESdat, ECutS etc		Esdat		Handed over by		Emma.S - EP Risk					
Contact Name		Craig Trimbur David Lawson		Analyses <small>Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.</small> Spoil Sample Preparation Suite WGTP-R1 - TRH/PAR/Phenols/OCY/PCB/VOC/Vinyl Chloride/ Metals (As, Cd, Cr, Cu, Ni, Pb, Hg, Ag, Sn, Mo, Se, Zn) C6+ CW Total Fluoride/ pH PFAS Extended Suite - 0.1-5ug/kg ASLP PH 5 - PFAS 0.01-0.05 ug/l ASLP Reagent - PFAS 0.01-0.05ug/l		Email for Invoice		finance@agonenviro.com.au LabReports.TST@agonenviro.com.au		Email for Results		LabReports.TST@agonenviro.com.au agonenvironmental@esdat.com.au motherhublabresults1@wgtp.com.au									
Phone No		+61 400 826 907 (Craig) +61 490 411 004 (David)				Containers		Change container type & size if necessary.		Required Turnaround Time (TAT)		Default will be 5 days if not ticked.									
Special Directions		Please provide an interim lab report if finalised report has not been provided by 14 days from sample receipt. Please provide eSRN along with oter sample receipt documentation.				500mL Plastic				<input type="checkbox"/> Overnight (reporting by 9am) ♦ <input type="checkbox"/> Same day ♦ <input type="checkbox"/> 1 day ♦ <input type="checkbox"/> 2 days ♦ <input type="checkbox"/> 3 days ♦ <input type="checkbox"/> 5 days (Standard) <input type="checkbox"/> Other()											
Purchase Order						250mL Plastic				♦ Surcharge will apply <input type="checkbox"/> Other (reporting by 9am) ♦											
Quote ID No		Agon WGTP TST		125mL Plastic				200mL Amber Glass				Jar (Glass or HDPE) Other (Asbestos AS1984, WA Guidelines)									
Client Sample ID		Sampled Date/Time		Matrix								Sample Comments		/ Dangerous Goods Hazard Warning							
1		SX_IB_20220605_11_04_SS_Triplicate_EUF		5/06/22		S		X		X		X		X							
2		SX_IB_20220605_11_19_SS_Triplicate_EUF		5/06/22		S		X		X		X		X							
3		SX_OB_20220605_11_29_SS_Primary_EUF		5/06/22		S		X		X		X		X							
4		SX_OB_20220605_11_29_SS_Duplicate_EUF		5/06/22		S		X		X		X		X							
Total Counts								4		4		4		4							
Method of Shipment		<input checked="" type="checkbox"/> Courier (#)		<input type="checkbox"/> Hand Delivered		<input type="checkbox"/> Postal		Name		Emma.S		Signature		Date		06/06/22		Time		09:45	
Laboratory Use Only		Received By		jake		SYD BNE MEL PER ADL NTL DRW		Signature		Date		6/6		Time		12:15		Temperature		11.5	
		Received By				SYD BNE MEL PER ADL NTL DRW		Signature		Date				Time				Report No			

Eurofins Environment Testing Australia Pty Ltd

Submission of samples to the laboratory will be deemed acceptance of Eurofins | Environment Testing Standard Terms and Conditions unless agreed otherwise. A copy is available on request.

894855

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne

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

Sydney

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

Brisbane

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

Newcastle

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

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth

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

Eurofins Environment Testing NZ Limited

NZBN: 9429046024954

Auckland

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

Christchurch

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

Sample Receipt Advice

Company name: Agon Environmental Pty Ltd - VIC
Contact name: Agon Lab Reports (Spoil Project)
Project name: 20220605191054-Eurofin-8
Project ID: JC0927
Turnaround time: 3 Day
Date/Time received: Jun 6, 2022 12:15 PM
Eurofins reference: 894855

Sample Information

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

Notes

Contact

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

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

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

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

Company Name: Agon Environmental Pty Ltd - VIC
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063
Project Name: 20220605191054-Eurofin-8
Project ID: JC0927

Order No.:
Report #: 894855
Phone: 08 8338 1009
Fax:

Received: Jun 6, 2022 12:15 PM
Due: Jun 9, 2022
Priority: 3 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	SX_IB_20220605_11_04_SS_Triplicate_EU_F	Jun 05, 2022	11:04AM	Soil	M22-Jn0010516		X	X	X
2	SX_IB_20220605_11_19_SS_Triplicate_EU_F	Jun 05, 2022	11:19AM	Soil	M22-Jn0010517		X	X	X
3	SX_OB_20220605_11_29_SS_Primary_EU_F	Jun 05, 2022	11:29AM	Soil	M22-Jn0010518		X	X	X

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

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Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
4	SX_OB_20220605_11_29_SS_Duplicate_EUF	Jun 05, 2022	11:29AM	Soil	M22-Jn0010519		X	X	X
5	SX_IB_20220605_11_04_SS_Triplicate_EUF	Jun 05, 2022	11:04AM	AUS Leachate - pH 5.0	M22-Jn0010520	X		X	
6	SX_IB_20220605_11_19_SS_Triplicate_EUF	Jun 05, 2022	11:19AM	AUS Leachate - pH 5.0	M22-Jn0010521	X		X	
7	SX_OB_20220605_11_29_SS	Jun 05, 2022	11:29AM	AUS Leachate - pH 5.0	M22-Jn0010522	X		X	

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

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Eurofins Analytical Services Manager : Michael Cassidy

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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								
8	SX_OB_20220605_11_29_S_S_Duplicate_EUF	Jun 05, 2022	11:29AM	AUS Leachate - pH 5.0	M22-Jn0010523	X		X	
9	SX_IB_20220605_11_04_SS_Triplicate_EUF	Jun 05, 2022	11:04AM	AUS Leachate - Reagent Water	M22-Jn0010524	X		X	
10	SX_IB_20220605_11_19_SS_Triplicate_EUF	Jun 05, 2022	11:19AM	AUS Leachate - Reagent Water	M22-Jn0010525	X		X	

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

Project Name: 20220605191054-Eurofin-8
Project ID: JC0927

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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									
11	SX_OB_20220605_11_29_S_S_Primary_EU_F	Jun 05, 2022	11:29AM	AUS Leachate - Reagent Water	M22-Jn0010526	X		X	
12	SX_OB_20220605_11_29_S_S_Duplicate_EUF	Jun 05, 2022	11:29AM	AUS Leachate - Reagent Water	M22-Jn0010527	X		X	
Test Counts						8	4	12	4

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



NATA Accredited
Accreditation Number 1261
Site Number 1254

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

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

Report **894855-L**
Project name **20220605191054-Eurofin-8**
Project ID **JC0927**
Received Date **Jun 06, 2022**

Client Sample ID			SX_IB_202206 05_11_04_SS Triplicate_EUF	SX_IB_202206 05_11_19_SS Triplicate_EUF	SX_OB_20220 605_11_29_SS Primary_EUF	SX_OB_20220 605_11_29_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- Jn0010520	M22- Jn0010521	M22- Jn0010522	M22- Jn0010523
Date Sampled			Jun 05, 2022	Jun 05, 2022	Jun 05, 2022	Jun 05, 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	5.0	5.0	5.0	5.0
pH (off)	0.1	pH Units	5.1	5.0	5.0	5.0
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	%	91	74	87	84
13C5-PFPeA (surr.)	1	%	100	79	112	87
13C5-PFHxA (surr.)	1	%	69	93	113	102
13C4-PFHpA (surr.)	1	%	52	58	97	101
13C8-PFOA (surr.)	1	%	96	118	106	137
13C5-PFNA (surr.)	1	%	97	125	104	129
13C6-PFDA (surr.)	1	%	105	124	111	138
13C2-PFUnDA (surr.)	1	%	100	114	105	102
13C2-PFDoDA (surr.)	1	%	107	114	112	106
13C2-PFTTeDA (surr.)	1	%	121	175	119	159

Client Sample ID			SX_IB_202206 05_11_04_SS Triplicate_EUF	SX_IB_202206 05_11_19_SS Triplicate_EUF	SX_OB_20220 605_11_29_SS Primary_EUF	SX_OB_20220 605_11_29_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- Jn0010520	M22- Jn0010521	M22- Jn0010522	M22- Jn0010523
Date Sampled			Jun 05, 2022	Jun 05, 2022	Jun 05, 2022	Jun 05, 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	%	90	127	89	127
D3-N-MeFOSA (surr.)	1	%	84	72	71	68
D5-N-EtFOSA (surr.)	1	%	89	75	76	76
D7-N-MeFOSE (surr.)	1	%	78	94	74	91
D9-N-EtFOSE (surr.)	1	%	80	75	70	76
D5-N-EtFOSAA (surr.)	1	%	108	134	108	121
D3-N-MeFOSAA (surr.)	1	%	92	105	87	92
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	91	101	104
18O2-PFHxS (surr.)	1	%	86	86	95	90
13C8-PFOS (surr.)	1	%	95	97	97	102
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	%	117	91	72	68
13C2-6:2 FTSA (surr.)	1	%	104	117	126	137
13C2-8:2 FTSA (surr.)	1	%	164	68	109	98
13C2-10:2 FTSA (surr.)	1	%	89	135	97	112
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_IB_202206 05_11_04_SS Triplicate_EUF	SX_IB_202206 05_11_19_SS Triplicate_EUF	SX_OB_20220 605_11_29_SS _Primary_EUF	SX_OB_20220 605_11_29_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- Jn0010524	M22- Jn0010525	M22- Jn0010526	M22- Jn0010527
Date Sampled			Jun 05, 2022	Jun 05, 2022	Jun 05, 2022	Jun 05, 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	6.7	6.7	6.7	6.7
pH (off)	0.1	pH Units	6.8	7.7	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 (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	%	85	83	84	83
13C5-PFPeA (surr.)	1	%	94	99	113	114
13C5-PFHxA (surr.)	1	%	71	107	111	102
13C4-PFHpA (surr.)	1	%	50	57	101	103
13C8-PFOA (surr.)	1	%	91	99	116	113
13C5-PFNA (surr.)	1	%	103	104	109	103
13C6-PFDA (surr.)	1	%	116	129	122	118
13C2-PFUnDA (surr.)	1	%	121	126	117	118
13C2-PFDoDA (surr.)	1	%	117	121	109	111
13C2-PFTeDA (surr.)	1	%	111	115	108	115
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	%	95	94	95	95
D3-N-MeFOSA (surr.)	1	%	109	105	94	99
D5-N-EtFOSA (surr.)	1	%	106	112	90	97
D7-N-MeFOSE (surr.)	1	%	76	75	68	81
D9-N-EtFOSE (surr.)	1	%	77	76	68	72
D5-N-EtFOSAA (surr.)	1	%	125	133	112	114
D3-N-MeFOSAA (surr.)	1	%	118	124	98	86

Client Sample ID			SX_IB_202206 05_11_04_SS Triplicate_EUF	SX_IB_202206 05_11_19_SS Triplicate_EUF	SX_OB_20220 605_11_29_SS _Primary_EUF	SX_OB_20220 605_11_29_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- Jn0010524	M22- Jn0010525	M22- Jn0010526	M22- Jn0010527
Date Sampled			Jun 05, 2022	Jun 05, 2022	Jun 05, 2022	Jun 05, 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	%	88	96	106	110
18O2-PFHxS (surr.)	1	%	87	96	104	100
13C8-PFOS (surr.)	1	%	102	105	99	98
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	%	109	109	51	50
13C2-6:2 FTSA (surr.)	1	%	108	134	154	146
13C2-8:2 FTSA (surr.)	1	%	172	138	106	85
13C2-10:2 FTSA (surr.)	1	%	109	132	101	97
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	Jun 06, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Jun 06, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Jun 06, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 06, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 06, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 06, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 06, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 06, 2022	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Jun 6, 2022 12:15 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	894855	Due:	Jun 9, 2022
Project Name:	20220605191054-Eurofin-8	Phone:	08 8338 1009	Priority:	3 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_IB_20220605_11_04_SS_Triplicate_EU_F	Jun 05, 2022	11:04AM	Soil	M22-Jn0010516		X	X	X
2	SX_IB_20220605_11_19_SS_Triplicate_EU_F	Jun 05, 2022	11:19AM	Soil	M22-Jn0010517		X	X	X
3	SX_OB_20220605_11_29_S_S_Primary_EU_F	Jun 05, 2022	11:29AM	Soil	M22-Jn0010518		X	X	X

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

Project Name: 20220605191054-Eurofin-8
Project ID: JC0927

Order No.:
Report #: 894855
Phone: 08 8338 1009
Fax:

Received: Jun 6, 2022 12:15 PM
Due: Jun 9, 2022
Priority: 3 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
4	SX_OB_20220605_11_29_SS_Duplicate_EUF	Jun 05, 2022	11:29AM	Soil	M22-Jn0010519		X	X	X
5	SX_IB_20220605_11_04_SS_Triplicate_EUF	Jun 05, 2022	11:04AM	AUS Leachate - pH 5.0	M22-Jn0010520	X		X	
6	SX_IB_20220605_11_19_SS_Triplicate_EUF	Jun 05, 2022	11:19AM	AUS Leachate - pH 5.0	M22-Jn0010521	X		X	
7	SX_OB_20220605_11_29_SS	Jun 05, 2022	11:29AM	AUS Leachate - pH 5.0	M22-Jn0010522	X		X	

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

Project Name: 20220605191054-Eurofin-8
Project ID: JC0927

Order No.:
Report #: 894855
Phone: 08 8338 1009
Fax:

Received: Jun 6, 2022 12:15 PM
Due: Jun 9, 2022
Priority: 3 Day
Contact Name: Agon Lab Reports (Spoil Project)

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	IWRG 621 WQTP Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217									
Brisbane Laboratory - NATA # 1261 Site # 20794									
Mayfield Laboratory - NATA # 1261 Site # 25079									
Perth Laboratory - NATA # 2377 Site # 2370									
External Laboratory									
	S_Primary_EU F								
8	SX_OB_20220605_11_29_S_S_Duplicate_EUF	Jun 05, 2022	11:29AM	AUS Leachate - pH 5.0	M22-Jn0010523	X		X	
9	SX_IB_20220605_11_04_SS_Triplicate_EUF	Jun 05, 2022	11:04AM	AUS Leachate - Reagent Water	M22-Jn0010524	X		X	
10	SX_IB_20220605_11_19_SS_Triplicate_EUF	Jun 05, 2022	11:19AM	AUS Leachate - Reagent Water	M22-Jn0010525	X		X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Jun 6, 2022 12:15 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	894855	Due:	Jun 9, 2022
Project Name:	20220605191054-Eurofin-8	Phone:	08 8338 1009	Priority:	3 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									
11	SX_OB_20220605_11_29_S_S_Primary_EU F	Jun 05, 2022	11:29AM	AUS Leachate - Reagent Water	M22-Jn0010526	X		X	
12	SX_OB_20220605_11_29_S_S_Duplicate_EUF	Jun 05, 2022	11:29AM	AUS Leachate - Reagent Water	M22-Jn0010527	X		X	
Test Counts						8	4	12	4

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)	%	115		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	99		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	75		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	72		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	76		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	71		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	80		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	92		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	85		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	105		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	89		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code		
LCS - % Recovery									
Perfluoroalkyl sulfonamido substances									
Perfluorooctane sulfonamide (FOSA)	%	82			50-150	Pass			
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	120			50-150	Pass			
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	120			50-150	Pass			
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	81			50-150	Pass			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	95			50-150	Pass			
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	92			50-150	Pass			
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	88			50-150	Pass			
LCS - % Recovery									
Perfluoroalkyl sulfonic acids (PFSA)									
Perfluorobutanesulfonic acid (PFBS)	%	69			50-150	Pass			
Perfluorononanesulfonic acid (PFNS)	%	71			50-150	Pass			
Perfluoropropanesulfonic acid (PFPrS)	%	80			50-150	Pass			
Perfluoropentanesulfonic acid (PFPeS)	%	75			50-150	Pass			
Perfluorohexanesulfonic acid (PFHxS)	%	81			50-150	Pass			
Perfluoroheptanesulfonic acid (PFHpS)	%	84			50-150	Pass			
Perfluorooctanesulfonic acid (PFOS)	%	76			50-150	Pass			
Perfluorodecanesulfonic acid (PFDS)	%	56			50-150	Pass			
LCS - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	94			50-150	Pass			
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	118			50-150	Pass			
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	137			50-150	Pass			
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	81			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-Jn0006504	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances									
				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M22-Jn0006504	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Jn0006504	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Jn0006504	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Jn0006504	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Jn0006504	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-Jn0006504	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Jn0006504	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Jn0006504	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-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Jn0006504	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Jn0006504	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Jn0006504	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:

Callum McEwan	Analytical Services Manager
Joseph Edouard	Senior Analyst-PFAS



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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



NATA Accredited
Accreditation Number 1261
Site Number 1254

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

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

Report **894855-S**
Project name **20220605191054-Eurofin-8**
Project ID **JC0927**
Received Date **Jun 06, 2022**

Client Sample ID			SX_IB_202206 05_11_04_SS Triplicate_EUF	SX_IB_202206 05_11_19_SS Triplicate_EUF	SX_OB_20220 605_11_29_SS _Primary_EUF	SX_OB_20220 605_11_29_SS _Duplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0010516	M22- Jn0010517	M22- Jn0010518	M22- Jn0010519
Date Sampled			Jun 05, 2022	Jun 05, 2022	Jun 05, 2022	Jun 05, 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_IB_202206 05_11_04_SS Triplicate_EUF	SX_IB_202206 05_11_19_SS Triplicate_EUF	SX_OB_20220 605_11_29_SS _Primary_EUF	SX_OB_20220 605_11_29_SS _Duplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0010516	M22- Jn0010517	M22- Jn0010518	M22- Jn0010519
Date Sampled			Jun 05, 2022	Jun 05, 2022	Jun 05, 2022	Jun 05, 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	%	85	103	77	82
Toluene-d8 (surr.)	1	%	82	92	72	83
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_IB_202206 05_11_04_SS Triplicate_EUF	SX_IB_202206 05_11_19_SS Triplicate_EUF	SX_OB_20220 605_11_29_SS _Primary_EUF	SX_OB_20220 605_11_29_SS _Duplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0010516	M22- Jn0010517	M22- Jn0010518	M22- Jn0010519
Date Sampled			Jun 05, 2022	Jun 05, 2022	Jun 05, 2022	Jun 05, 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	%	148	105	101	98
p-Terphenyl-d14 (surr.)	1	%	138	99	101	85
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	%	119	62	62	52
Tetrachloro-m-xylene (surr.)	1	%	54	126	125	113

Client Sample ID			SX_IB_202206 05_11_04_SS Triplicate_EUF	SX_IB_202206 05_11_19_SS Triplicate_EUF	SX_OB_20220 605_11_29_SS _Primary_EUF	SX_OB_20220 605_11_29_SS _Duplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0010516	M22- Jn0010517	M22- Jn0010518	M22- Jn0010519
Date Sampled			Jun 05, 2022	Jun 05, 2022	Jun 05, 2022	Jun 05, 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	%	119	62	62	52
Tetrachloro-m-xylene (surr.)	1	%	54	126	125	113
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	%	35	78	75	70
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	< 100	< 100	< 100	< 100
pH (1:5 Aqueous extract at 25°C as rec.)						
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	7.4	8.0	6.9	6.5
% Moisture						
% Moisture	1	%	25	26	20	20
Heavy Metals						
Arsenic	2	mg/kg	22	24	30	29
Cadmium	1	mg/kg	< 1	< 1	< 1	< 1
Chromium	5	mg/kg	150	130	130	120
Copper	5	mg/kg	64	61	76	55
Lead	5	mg/kg	< 5	< 5	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_IB_202206 05_11_04_SS Triplicate_EUF	SX_IB_202206 05_11_19_SS Triplicate_EUF	SX_OB_20220 605_11_29_SS _Primary_EUF	SX_OB_20220 605_11_29_SS _Duplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0010516	M22- Jn0010517	M22- Jn0010518	M22- Jn0010519
Date Sampled			Jun 05, 2022	Jun 05, 2022	Jun 05, 2022	Jun 05, 2022
Test/Reference	LOR	Unit				
Heavy Metals						
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	190	180	250	150
Selenium	5	mg/kg	< 5	< 5	< 5	< 5
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	110	110	150	94
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	%	90	100	95	108
13C5-PFPeA (surr.)	1	%	107	88	112	95
13C5-PFHxA (surr.)	1	%	112	84	103	111
13C4-PFHpA (surr.)	1	%	105	81	96	107
13C8-PFOA (surr.)	1	%	121	107	120	133
13C5-PFNA (surr.)	1	%	116	80	105	98
13C6-PFDA (surr.)	1	%	124	79	87	93
13C2-PFUnDA (surr.)	1	%	121	107	105	118
13C2-PFDoDA (surr.)	1	%	128	106	108	104
13C2-PFTeDA (surr.)	1	%	95	93	98	108
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	85	96	96
D3-N-MeFOSA (surr.)	1	%	122	88	96	85
D5-N-EtFOSA (surr.)	1	%	85	87	95	94
D7-N-MeFOSE (surr.)	1	%	95	88	89	106
D9-N-EtFOSE (surr.)	1	%	97	92	98	106
D5-N-EtFOSAA (surr.)	1	%	142	103	120	113
D3-N-MeFOSAA (surr.)	1	%	85	121	99	103

Client Sample ID			SX_IB_202206 05_11_04_SS Triplicate_EUF	SX_IB_202206 05_11_19_SS Triplicate_EUF	SX_OB_20220 605_11_29_SS _Primary_EUF	SX_OB_20220 605_11_29_SS _Duplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22- Jn0010516	M22- Jn0010517	M22- Jn0010518	M22- Jn0010519
Date Sampled			Jun 05, 2022	Jun 05, 2022	Jun 05, 2022	Jun 05, 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	%	109	92	97	101
18O2-PFHxS (surr.)	1	%	102	87	86	99
13C8-PFOS (surr.)	1	%	99	81	70	76
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	%	152	97	89	90
13C2-6:2 FTSA (surr.)	1	%	129	72	77	78
13C2-8:2 FTSA (surr.)	1	%	88	54	59	58
13C2-10:2 FTSA (surr.)	1	%	108	97	105	115
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	Jun 06, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Jun 06, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Jun 06, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	Jun 06, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	Jun 06, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Jun 06, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	Jun 06, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	Jun 06, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Jun 06, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Jun 06, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	Jun 06, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	Jun 06, 2022	14 Days
Fluoride (Total) - Method: LTM-INO-4150 Determination of Total Fluoride PART A – CIC	Melbourne	Jun 07, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Jun 06, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	Jun 06, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Jun 06, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 06, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 06, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 06, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 06, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Jun 06, 2022	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Jun 6, 2022 12:15 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	894855	Due:	Jun 9, 2022
Project Name:	20220605191054-Eurofin-8	Phone:	08 8338 1009	Priority:	3 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_IB_20220605_11_04_SS_Triplicate_EU_F	Jun 05, 2022	11:04AM	Soil	M22-Jn0010516		X	X	X
2	SX_IB_20220605_11_19_SS_Triplicate_EU_F	Jun 05, 2022	11:19AM	Soil	M22-Jn0010517		X	X	X
3	SX_OB_20220605_11_29_S_S_Primary_EU_F	Jun 05, 2022	11:29AM	Soil	M22-Jn0010518		X	X	X

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

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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									
4	SX_OB_20220605_11_29_SS_Duplicate_EUF	Jun 05, 2022	11:29AM	Soil	M22-Jn0010519		X	X	X
5	SX_IB_20220605_11_04_SS_Triplicate_EUF	Jun 05, 2022	11:04AM	AUS Leachate - pH 5.0	M22-Jn0010520	X		X	
6	SX_IB_20220605_11_19_SS_Triplicate_EUF	Jun 05, 2022	11:19AM	AUS Leachate - pH 5.0	M22-Jn0010521	X		X	
7	SX_OB_20220605_11_29_SS	Jun 05, 2022	11:29AM	AUS Leachate - pH 5.0	M22-Jn0010522	X		X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Jun 6, 2022 12:15 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	894855	Due:	Jun 9, 2022
Project Name:	20220605191054-Eurofin-8	Phone:	08 8338 1009	Priority:	3 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									
	S_Primary_EU F								
8	SX_OB_20220605_11_29_S_S_Duplicate_EUF	Jun 05, 2022	11:29AM	AUS Leachate - pH 5.0	M22-Jn0010523	X		X	
9	SX_IB_20220605_11_04_SS_Triplicate_EUF	Jun 05, 2022	11:04AM	AUS Leachate - Reagent Water	M22-Jn0010524	X		X	
10	SX_IB_20220605_11_19_SS_Triplicate_EUF	Jun 05, 2022	11:19AM	AUS Leachate - Reagent Water	M22-Jn0010525	X		X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Jun 6, 2022 12:15 PM
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Project Name:	20220605191054-Eurofin-8	Phone:	08 8338 1009	Priority:	3 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									
11	SX_OB_20220605_11_29_S_S_Primary_EU_F	Jun 05, 2022	11:29AM	AUS Leachate - Reagent Water	M22-Jn0010526	X		X	
12	SX_OB_20220605_11_29_S_S_Duplicate_EUF	Jun 05, 2022	11:29AM	AUS Leachate - Reagent Water	M22-Jn0010527	X		X	
Test Counts						8	4	12	4

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	< 1			1	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Molybdenum	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 5			5	Pass	
Silver	mg/kg	< 2			2	Pass	
Tin	mg/kg	< 10			10	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Zinc	mg/kg	< 5		5	Pass	
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	%	90		70-130	Pass	
TRH C10-C14	%	116		70-130	Pass	
Naphthalene	%	87		70-130	Pass	
TRH C6-C10	%	90		70-130	Pass	
LCS - % Recovery						
Volatile Organics						
1.1-Dichloroethene	%	71		70-130	Pass	
1.1.1-Trichloroethane	%	74		70-130	Pass	
1.2-Dichlorobenzene	%	83		70-130	Pass	
1.2-Dichloroethane	%	90		70-130	Pass	
Benzene	%	81		70-130	Pass	
Ethylbenzene	%	81		70-130	Pass	
m&p-Xylenes	%	78		70-130	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Toluene	%	77		70-130	Pass	
Trichloroethene	%	82		70-130	Pass	
Xylenes - Total*	%	79		70-130	Pass	
LCS - % Recovery						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	%	108		70-130	Pass	
Acenaphthylene	%	121		70-130	Pass	
Anthracene	%	87		70-130	Pass	
Benz(a)anthracene	%	103		70-130	Pass	
Benzo(a)pyrene	%	105		70-130	Pass	
Benzo(b&j)fluoranthene	%	100		70-130	Pass	
Benzo(g,h,i)perylene	%	122		70-130	Pass	
Benzo(k)fluoranthene	%	118		70-130	Pass	
Chrysene	%	121		70-130	Pass	
Dibenz(a,h)anthracene	%	112		70-130	Pass	
Fluoranthene	%	103		70-130	Pass	
Fluorene	%	113		70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	119		70-130	Pass	
Naphthalene	%	121		70-130	Pass	
Phenanthrene	%	94		70-130	Pass	
Pyrene	%	99		70-130	Pass	
LCS - % Recovery						
Organochlorine Pesticides						
Chlordanes - Total	%	104		70-130	Pass	
4,4'-DDE	%	102		70-130	Pass	
b-HCH	%	110		70-130	Pass	
Endrin	%	107		70-130	Pass	
Endrin ketone	%	126		70-130	Pass	
Heptachlor	%	88		70-130	Pass	
Hexachlorobenzene	%	92		70-130	Pass	
Methoxychlor	%	86		70-130	Pass	
LCS - % Recovery						
Phenols (Halogenated)						
2-Chlorophenol	%	66		25-140	Pass	
2,4-Dichlorophenol	%	66		25-140	Pass	
2,4,5-Trichlorophenol	%	56		25-140	Pass	
2,6-Dichlorophenol	%	81		25-140	Pass	
Tetrachlorophenols - Total	%	51		25-140	Pass	
LCS - % Recovery						
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	%	71		25-140	Pass	
2-Nitrophenol	%	78		25-140	Pass	
2,4-Dimethylphenol	%	55		25-140	Pass	
2,4-Dinitrophenol	%	64		25-140	Pass	
2-Methylphenol (o-Cresol)	%	33		25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	64		25-140	Pass	
Dinoseb	%	71		25-140	Pass	
LCS - % Recovery						
Chromium (hexavalent)	%	72		70-130	Pass	
Cyanide (total)	%	112		70-130	Pass	
Fluoride (Total)	%	97		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
Total Recoverable Hydrocarbons				Result 1				
TRH C6-C9	M22-Jn0010574	NCP	%	75		70-130	Pass	
TRH C10-C14	M22-Jn0008998	NCP	%	113		70-130	Pass	
Naphthalene	M22-Jn0010574	NCP	%	83		70-130	Pass	
TRH C6-C10	M22-Jn0010574	NCP	%	75		70-130	Pass	
TRH >C10-C16	M22-Jn0008998	NCP	%	120		70-130	Pass	
Spike - % Recovery								
Volatile Organics				Result 1				
1.1-Dichloroethene	M22-Jn0010574	NCP	%	73		70-130	Pass	
1.1.1-Trichloroethane	M22-Jn0010574	NCP	%	82		70-130	Pass	
1.2-Dichlorobenzene	M22-Jn0010574	NCP	%	78		70-130	Pass	
1.2-Dichloroethane	M22-Jn0010574	NCP	%	79		70-130	Pass	
Benzene	M22-Jn0010574	NCP	%	78		70-130	Pass	
Ethylbenzene	M22-Jn0010574	NCP	%	83		70-130	Pass	
m&p-Xylenes	M22-Jn0010574	NCP	%	80		70-130	Pass	
o-Xylene	M22-Jn0010574	NCP	%	83		70-130	Pass	
Toluene	M22-Jn0010574	NCP	%	76		70-130	Pass	
Trichloroethene	M22-Jn0010574	NCP	%	80		70-130	Pass	
Xylenes - Total*	M22-Jn0010574	NCP	%	81		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	M22-Jn0004850	NCP	%	119		70-130	Pass	
Acenaphthylene	M22-Jn0004850	NCP	%	76		70-130	Pass	
Anthracene	M22-Jn0004850	NCP	%	95		70-130	Pass	
Benz(a)anthracene	M22-Jn0004850	NCP	%	112		70-130	Pass	
Benzo(a)pyrene	M22-Jn0004850	NCP	%	98		70-130	Pass	
Benzo(b&j)fluoranthene	M22-Jn0004850	NCP	%	102		70-130	Pass	
Benzo(g,h,i)perylene	M22-Jn0004850	NCP	%	82		70-130	Pass	
Benzo(k)fluoranthene	M22-Jn0004850	NCP	%	104		70-130	Pass	
Chrysene	M22-Jn0004850	NCP	%	98		70-130	Pass	
Dibenz(a,h)anthracene	M22-Jn0004850	NCP	%	73		70-130	Pass	
Fluoranthene	M22-Jn0004850	NCP	%	91		70-130	Pass	
Fluorene	M22-Jn0004850	NCP	%	99		70-130	Pass	
Indeno(1,2,3-cd)pyrene	M22-Jn0004850	NCP	%	82		70-130	Pass	
Naphthalene	M22-Jn0004850	NCP	%	81		70-130	Pass	
Phenanthrene	M22-Jn0004850	NCP	%	72		70-130	Pass	
Pyrene	M22-Jn0004850	NCP	%	87		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	M22-Jn0013284	NCP	%	80		70-130	Pass	
4,4'-DDD	M22-Jn0013284	NCP	%	104		70-130	Pass	
4,4'-DDE	M22-Jn0013284	NCP	%	83		70-130	Pass	
4,4'-DDT	M22-Jn0013284	NCP	%	79		70-130	Pass	
a-HCH	M22-Jn0013284	NCP	%	86		70-130	Pass	
Aldrin	M22-Jn0013284	NCP	%	84		70-130	Pass	
b-HCH	M22-Jn0013284	NCP	%	88		70-130	Pass	
d-HCH	M22-Jn0013284	NCP	%	102		70-130	Pass	
Dieldrin	M22-Jn0013284	NCP	%	95		70-130	Pass	
Endosulfan I	M22-Jn0013284	NCP	%	85		70-130	Pass	
Endosulfan II	M22-Jn0013284	NCP	%	75		70-130	Pass	
Endosulfan sulphate	M22-Jn0013284	NCP	%	87		70-130	Pass	
Endrin	M22-Jn0013284	NCP	%	78		70-130	Pass	
Endrin aldehyde	M22-Jn0013284	NCP	%	89		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Endrin ketone	M22-Jn0013284	NCP	%	77		70-130	Pass	
g-HCH (Lindane)	M22-Jn0013284	NCP	%	76		70-130	Pass	
Heptachlor	M22-Jn0013284	NCP	%	72		70-130	Pass	
Heptachlor epoxide	M22-Jn0013284	NCP	%	84		70-130	Pass	
Hexachlorobenzene	M22-Jn0013284	NCP	%	78		70-130	Pass	
Methoxychlor	M22-Jn0013284	NCP	%	89		70-130	Pass	
Spike - % Recovery								
Polychlorinated Biphenyls				Result 1				
Aroclor-1016	L22-My0067274	NCP	%	112		70-130	Pass	
Aroclor-1260	L22-My0067274	NCP	%	91		70-130	Pass	
Spike - % Recovery								
Phenols (Halogenated)				Result 1				
2-Chlorophenol	M22-Jn0004850	NCP	%	51		30-130	Pass	
2,4-Dichlorophenol	M22-Jn0004850	NCP	%	87		30-130	Pass	
2,4,5-Trichlorophenol	M22-Jn0004850	NCP	%	44		30-130	Pass	
2,4,6-Trichlorophenol	M22-My0075245	NCP	%	77		30-130	Pass	
2,6-Dichlorophenol	M22-Jn0004850	NCP	%	95		30-130	Pass	
Pentachlorophenol	M22-Jn0004850	NCP	%	61		30-130	Pass	
Tetrachlorophenols - Total	M22-Jn0004850	NCP	%	106		30-130	Pass	
Spike - % Recovery								
Phenols (non-Halogenated)				Result 1				
2-Cyclohexyl-4,6-dinitrophenol	M22-Jn0004850	NCP	%	94		30-130	Pass	
2-Methyl-4,6-dinitrophenol	M22-My0075245	NCP	%	39		30-130	Pass	
2-Nitrophenol	M22-Jn0004850	NCP	%	92		30-130	Pass	
2,4-Dimethylphenol	M22-Jn0004850	NCP	%	54		30-130	Pass	
2,4-Dinitrophenol	M22-Jn0004850	NCP	%	98		30-130	Pass	
2-Methylphenol (o-Cresol)	M22-My0076151	NCP	%	71		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-My0076151	NCP	%	72		30-130	Pass	
4-Nitrophenol	M22-My0075245	NCP	%	127		30-130	Pass	
Dinoseb	M22-Jn0004850	NCP	%	80		30-130	Pass	
Phenol	M22-Jn0004850	NCP	%	33		30-130	Pass	
Spike - % Recovery								
				Result 1				
Cyanide (total)	M22-Jn0009088	NCP	%	93		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	M22-Jn0011169	NCP	%	107		75-125	Pass	
Cadmium	M22-Jn0011169	NCP	%	81		75-125	Pass	
Chromium	M22-Jn0011169	NCP	%	114		75-125	Pass	
Copper	M22-Jn0011169	NCP	%	111		75-125	Pass	
Lead	M22-Jn0011169	NCP	%	115		75-125	Pass	
Mercury	M22-Jn0011169	NCP	%	102		75-125	Pass	
Molybdenum	M22-Jn0011169	NCP	%	113		75-125	Pass	
Nickel	M22-Jn0011169	NCP	%	93		75-125	Pass	
Selenium	M22-Jn0011169	NCP	%	95		75-125	Pass	
Silver	M22-Jn0011169	NCP	%	86		75-125	Pass	
Tin	M22-Jn0011169	NCP	%	116		75-125	Pass	
Zinc	M22-Jn0011169	NCP	%	110		75-125	Pass	
Spike - % Recovery								
Phenols (Halogenated)				Result 1				
4-Chloro-3-methylphenol	M22-Jn0011171	NCP	%	52		30-130	Pass	
Spike - % Recovery								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1				
Perfluorobutanoic acid (PFBA)	M22-Jn0007677	NCP	%	106		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Perfluoropentanoic acid (PFPeA)	M22-Jn0007677	NCP	%	132	50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Jn0007677	NCP	%	108	50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Jn0007677	NCP	%	118	50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Jn0007677	NCP	%	108	50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Jn0007677	NCP	%	98	50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Jn0007677	NCP	%	126	50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Jn0007677	NCP	%	113	50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Jn0007677	NCP	%	121	50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Jn0007677	NCP	%	114	50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Jn0007677	NCP	%	110	50-150	Pass	
Spike - % Recovery							
Perfluoroalkyl sulfonamido substances				Result 1			
Perfluorooctane sulfonamide (FOSA)	M22-Jn0007677	NCP	%	114	50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Jn0007677	NCP	%	122	50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Jn0007677	NCP	%	99	50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Jn0007677	NCP	%	126	50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Jn0007677	NCP	%	120	50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Jn0007677	NCP	%	89	50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Jn0007677	NCP	%	119	50-150	Pass	
Spike - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1			
Perfluorobutanesulfonic acid (PFBS)	M22-Jn0007677	NCP	%	102	50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Jn0007677	NCP	%	128	50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Jn0007677	NCP	%	135	50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Jn0007677	NCP	%	113	50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Jn0007677	NCP	%	112	50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Jn0007677	NCP	%	73	50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Jn0007677	NCP	%	115	50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Jn0007677	NCP	%	137	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-Jn0007677	NCP	%	132	50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Jn0007677	NCP	%	121	50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Jn0007677	NCP	%	124	50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Jn0007677	NCP	%	141	50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M22-Jn0010516	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M22-Jn0008997	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M22-Jn0008997	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M22-Jn0008997	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Naphthalene	M22-Jn0010516	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M22-Jn0010516	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M22-Jn0008997	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M22-Jn0008997	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M22-Jn0008997	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Hexachlorobutadiene	M22-Jn0010516	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	M22-Jn0010516	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzene	M22-Jn0001157	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Bromobenzene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Dichlorodifluoromethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	M22-Jn0001157	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	M22-Jn0001157	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	M22-Jn0001157	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	M22-Jn0001157	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1,2-Dichloroethene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,3-Dichloropropene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-Jn0001157	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total*	M22-Jn0001157	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)anthracene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M22-Jn0015161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Hexachlorobenzene	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M22-Jn0015161	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	M22-Jn0004938	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	M22-Jn0015161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	M22-Jn0015161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	M22-Jn0015161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	M22-Jn0015161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	M22-Jn0015161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	M22-Jn0015161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	M22-Jn0015161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	M22-Jn0015161	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4-Dichlorophenol	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4,5-Trichlorophenol	M22-Jn0015161	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2,4,6-Trichlorophenol	M22-Jn0015161	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2,6-Dichlorophenol	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M22-Jn0015161	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	M22-Jn0015161	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	M22-Jn0015161	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4,6-dinitrophenol	M22-Jn0015161	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4,6-dinitrophenol	M22-Jn0015161	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	M22-Jn0015161	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2,4-Dimethylphenol	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2,4-Dinitrophenol	M22-Jn0015161	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	M22-Jn0015161	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-Jn0015161	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	M22-Jn0015161	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	M22-Jn0015161	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	M22-Jn0015161	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Cyanide (total)	M22-Jn0011553	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Jn0012449	NCP	pH Units	6.6	6.4	pass	30%	Pass	
% Moisture	M22-Jn0010574	NCP	%	32	32	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M22-Jn0011167	NCP	mg/kg	4.3	2.8	40	30%	Fail	Q15
Cadmium	M22-Jn0011167	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M22-Jn0011167	NCP	mg/kg	70	64	9.0	30%	Pass	
Copper	M22-Jn0011167	NCP	mg/kg	36	32	11	30%	Pass	
Lead	M22-Jn0011167	NCP	mg/kg	12	9.2	28	30%	Pass	
Mercury	M22-Jn0011167	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M22-Jn0011167	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M22-Jn0011167	NCP	mg/kg	140	130	7.0	30%	Pass	
Selenium	M22-Jn0011167	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M22-Jn0011167	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Tin	M22-Jn0011167	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M22-Jn0011167	NCP	mg/kg	62	57	8.0	30%	Pass	

Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Jn0010578	NCP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Jn0010578	NCP	ug/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Jn0010578	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-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Jn0010578	NCP	ug/kg	< 10	< 10	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Jn0010578	NCP	ug/kg	< 5	< 5	<1	30%	Pass

Duplicate				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-Jn0010517	CP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-Jn0010518	CP	mg/kg	< 1	< 1	<1	30%	Pass
Fluoride (Total)	M22-Jn0011425	NCP	mg/kg	< 100	< 100	<1	30%	Pass

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Callum McEwan	Analytical Services Manager
Caitlin Breeze	Senior Analyst-Inorganic
Edward Lee	Senior Analyst-Organic
Joseph Edouard	Senior Analyst-Organic
Joseph Edouard	Senior Analyst-PFAS
Joseph Edouard	Senior Analyst-Volatile
Linda Chouman	Senior Analyst-Sample Properties
Mary Makarios	Senior Analyst-Metal
Mele Singh	Senior Analyst-Volatile
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

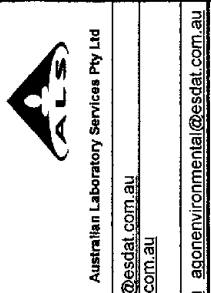
* Indicates NATA accreditation does not cover the performance of this service

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

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CHAIN OF CUSTODY DOCUMENTATION

CLIENT: Agon Environmental
 ADDRESS / OFFICE: Melbourne
 PROJECT MANAGER (PM): Craig Trimbur
 PROJECT ID: JC0927
 SITE: 20220519044335-ALS-Z1
 RESULTS REQUIRED (Date): 5 days
 QUOTE NO.: ME-150-19 WGRP
 P.O. NO.:
 EMAIL INVOICE TO: (if different to report) Labreports.TSI@agonenviro.com.au
 ANALYSIS REQUIRED INCLUDING SUITES (note - suite codes must be listed to attract suite prices)



ALS ID	SAMPLE INFORMATION (note: S = Soil, W=Water)			CONTAINER INFORMATION		Spot Sample Prep	P16 plus Cr	PFAS 28 Extended suite	ASLP PFAS - Extended Suite (Lab to determine pH)	Di Leachate PFAS - Extended Suite	Notes:
	SAMPLE ID	MATRIX	DATE	Time	Type / Code						
1	SX_IB_20220518_07_55_SS_Primary_ALS	S	18/05/2022	07:55	BUCKET	1	X	X	X	X	
2	SX_IB_20220518_07_56_SS_Duplicate_ALS	S	18/05/2022	07:56	BUCKET	1	X	X	X	X	
3	SX_OB_20220518_08_05_SS_Primary_ALS	S	18/05/2022	08:05	BUCKET	1	X	X	X	X	
4	SX_OB_20220518_08_22_SR_Rinseate_ALS	S	18/05/2022	08:22	BOTTLE	1					
5	SX_OB_20220518_08_23_SB_Blank_ALS	S	18/05/2022	08:23	BOTTLE	1					
6	SX_IB_20220518_11_51_SS_Primary_ALS	S	18/05/2022	11:51	BUCKET	1	X	X	X	X	
7	SX_IB_20220518_15_51_SS_Triplicate_ALS	S	18/05/2022	15:51	BUCKET	1	X	X	X	X	
8	SX_IB_20220518_15_54_SS_Primary_ALS	S	18/05/2022	15:54	BUCKET	1	X	X	X	X	
9	SX_OB_20220518_16_01_SS_Primary_ALS	S	18/05/2022	16:01	BUCKET	1	X	X	X	X	
10	SX_IB_20220518_23_55_SS_Primary_ALS	S	18/05/2022	23:55	BUCKET	1	X	X	X	X	
11	SX_IB_20220518_04_11_SS_Primary_ALS	S	19/05/2022	04:11	BUCKET	1	X	X	X	X	

Environmental Division
 Melbourne
 Work Order Reference
EM2209314



Telephone: 03-8549-3300

RELINQUISHED BY: *Hannah Kennedy* Date: 19/5/22
 RECEIVED BY: *Mona* Name: *Mona* Date: 19/5/22
 Name: *Hannah Kennedy* Of: *Mona* Com' Note No.:
 Name: Of: Transport Co.:
 Name: Of: Method of Shipment:

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

CERTIFICATE OF ANALYSIS

Work Order : **EM2209314**
Client : **AGON ENVIRONMENTAL PTY LTD**
Contact : DAVID LAWSON
Address : D1.1 63-85 TURNER STREET
 PORT MELBOURNE 3207

Telephone : ----
Project : JC0927
Order number : ----
C-O-C number : 20220519044335-ALS-21
Sampler : Dayle B - EP Risk
Site : 20220519044335-ALS-21
Quote number : EN/150/19 -WGTP -Bulk Sample Quote
No. of samples received : 20
No. of samples analysed : 20

Page : 1 of 29
Laboratory : Environmental Division Melbourne
Contact : Josh Alexander
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Date Samples Received : 19-May-2022 11:55
Date Analysis Commenced : 20-May-2022
Issue Date : 26-May-2022 19:51



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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

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



General Comments

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

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP074-UT: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074-WF: Where reported, Sum of trichlorobenzenes is the sum of the reported concentrations of 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene, and 1,3,5-Trichlorobenzene at or above the LOR.
- EP075-EM: EM2209314_008 Poor surrogate recovery due to matrix effects.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.
- EN60: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.
- EN60-DI: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.
- EP231X-INJ: The direct injection LCMSMS method may be used where the sample matrix is not suitable for Solid Phase Extraction (e.g. significant particulate load) or where only a single sample container is received.



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_IB_20220518_07_55_SS_Primary_ALS	SX_IB_20220518_07_56_SS_Duplicate_ALS	SX_OB_20220518_08_05_SS_Primary_ALS	SX_IB_20220518_11_51_SS_Primary_ALS	SX_IB_20220518_15_51_SS_Triplicate_ALS
Sampling date / time				18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51
Compound	CAS Number	LOR	Unit	EM2209314-001	EM2209314-002	EM2209314-003	EM2209314-006	EM2209314-007
				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
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_IB_20220518_07_55_SS_Primary_ALS	SX_IB_20220518_07_56_SS_Duplicate_ALS	SX_OB_20220518_08_05_SS_Primary_ALS	SX_IB_20220518_11_51_SS_Primary_ALS	SX_IB_20220518_15_51_SS_Triplicate_ALS
Sampling date / time				18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51
Compound	CAS Number	LOR	Unit	EM2209314-001	EM2209314-002	EM2209314-003	EM2209314-006	EM2209314-007
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
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	%	108	96.4	106	106	98.5
13C8-PFOA	----	0.02	%	100	94.2	98.4	99.9	92.6



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_IB_20220518_15_54_SS_Primary_ALS	SX_OB_20220518_16_01_SS_Primary_ALS	SX_IB_20220518_23_55_SS_Primary_ALS	SX_IB_20220519_04_11_SS_Primary_ALS	----
Sampling date / time				18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	----
Compound	CAS Number	LOR	Unit	EM2209314-008	EM2209314-009	EM2209314-010	EM2209314-011	-----
				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	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_IB_20220518_15_54_SS_Primary_ALS	SX_OB_20220518_16_01_SS_Primary_ALS	SX_IB_20220518_23_55_SS_Primary_ALS	SX_IB_20220519_04_11_SS_Primary_ALS	----
Sampling date / time				18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	----
Compound	CAS Number	LOR	Unit	EM2209314-008	EM2209314-009	EM2209314-010	EM2209314-011	-----
				Result	Result	Result	Result	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
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	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	103	109	100	102	----
13C8-PFOA	----	0.02	%	101	101	97.5	96.2	----



Analytical Results

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

Sample ID

				SX_IB_20220518_07_55_SS_Primary_ALS	SX_IB_20220518_07_56_SS_Duplicate_ALS	SX_OB_20220518_08_05_SS_Primary_ALS	SX_IB_20220518_11_51_SS_Primary_ALS	SX_IB_20220518_15_51_SS_Triplicate_ALS
Sampling date / time				18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51
Compound	CAS Number	LOR	Unit	EM2209314-012	EM2209314-013	EM2209314-014	EM2209314-015	EM2209314-016
				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
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

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

Sample ID

				SX_IB_20220518_07_55_SS_Primary_ALS	SX_IB_20220518_07_56_SS_Duplicate_ALS	SX_OB_20220518_08_05_SS_Primary_ALS	SX_IB_20220518_11_51_SS_Primary_ALS	SX_IB_20220518_15_51_SS_Triplicate_ALS
Sampling date / time				18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51
Compound	CAS Number	LOR	Unit	EM2209314-012	EM2209314-013	EM2209314-014	EM2209314-015	EM2209314-016
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
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	%	89.6	89.3	108	102	140
13C8-PFOA	----	0.02	%	86.3	91.1	89.7	101	129



Analytical Results

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

Sample ID

			SX_IB_20220518_15_54_SS_Primary_ALS	SX_OB_20220518_16_01_SS_Primary_ALS	SX_IB_20220518_23_55_SS_Primary_ALS	SX_IB_20220519_04_11_SS_Primary_ALS	----	
Sampling date / time			18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	----	
Compound	CAS Number	LOR	Unit	EM2209314-017	EM2209314-018	EM2209314-019	EM2209314-020	-----
				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	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----



Analytical Results

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

Sample ID

				SX_IB_20220518_15_54_SS_Primary_ALS	SX_OB_20220518_16_01_SS_Primary_ALS	SX_IB_20220518_23_55_SS_Primary_ALS	SX_IB_20220519_04_11_SS_Primary_ALS	----
Sampling date / time				18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	----
Compound	CAS Number	LOR	Unit	EM2209314-017	EM2209314-018	EM2209314-019	EM2209314-020	-----
				Result	Result	Result	Result	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
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	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	91.3	112	93.0	95.2	----
13C8-PFOA	----	0.02	%	100.0	93.3	100	92.7	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_IB_20220518_07_55_SS_Primary_ALS	SX_IB_20220518_07_56_SS_Duplicate_ALS	SX_OB_20220518_08_05_SS_Primary_ALS	SX_IB_20220518_11_51_SS_Primary_ALS	SX_IB_20220518_15_51_SS_Triplicate_ALS
Sampling date / time				18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51	
Compound	CAS Number	LOR	Unit	EM2209314-001	EM2209314-002	EM2209314-003	EM2209314-006	EM2209314-007	
				Result	Result	Result	Result	Result	
EA001: pH in soil using 0.01M CaCl extract									
pH (CaCl ₂)	----	0.1	pH Unit	7.7	7.7	8.0	8.0	8.5	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%	25.8	24.1	34.1	28.3	16.9	
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg	27	20	23	27	29	
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1	
Chromium	7440-47-3	5	mg/kg	104	99	135	102	101	
Copper	7440-50-8	5	mg/kg	61	56	67	56	52	
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5	
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	<5	<5	
Nickel	7440-02-0	5	mg/kg	179	174	201	170	157	
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5	
Silver	7440-22-4	2	mg/kg	<2	<2	<2	<2	<2	
Tin	7440-31-5	10	mg/kg	<10	<10	<10	<10	<10	
Zinc	7440-66-6	5	mg/kg	82	82	112	90	83	
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	1.8	1.2	<1.0	<1.0	1.2	
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	260	250	190	220	220	
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)									
Initial pH	----	0.1	pH Unit	9.3	9.3	8.9	9.5	9.3	
After HCl pH	----	0.1	pH Unit	1.4	1.4	1.4	1.3	1.4	
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	5.0	5.0	
Final pH	----	0.1	pH Unit	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	



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220518_07_55_SS_Primary_ALS	SX_IB_20220518_07_56_SS_Duplicate_ALS	SX_OB_20220518_08_05_SS_Primary_ALS	SX_IB_20220518_11_51_SS_Primary_ALS	SX_IB_20220518_15_51_SS_Triplicate_ALS
Sampling date / time				18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51
Compound	CAS Number	LOR	Unit	EM2209314-001	EM2209314-002	EM2209314-003	EM2209314-006	EM2209314-007
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3	106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
[^] 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
1,1,1,2,2-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_20220518_07_55_SS_Primary_ALS	SX_IB_20220518_07_56_SS_Duplicate_ALS	SX_OB_20220518_08_05_SS_Primary_ALS	SX_IB_20220518_11_51_SS_Primary_ALS	SX_IB_20220518_15_51_SS_Triplicate_ALS
Sampling date / time				18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51
Compound	CAS Number	LOR	Unit	EM2209314-001	EM2209314-002	EM2209314-003	EM2209314-006	EM2209314-007
				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
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220518_07_55_SS_Primary_ALS	SX_IB_20220518_07_56_SS_Duplicate_ALS	SX_OB_20220518_08_05_SS_Primary_ALS	SX_IB_20220518_11_51_SS_Primary_ALS	SX_IB_20220518_15_51_SS_Triplicate_ALS
Sampling date / time				18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51
Compound	CAS Number	LOR	Unit	EM2209314-001	EM2209314-002	EM2209314-003	EM2209314-006	EM2209314-007
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
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
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-29-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_IB_20220518_07_55_SS_Primary_ALS	SX_IB_20220518_07_56_SS_Duplicate_ALS	SX_OB_20220518_08_05_SS_Primary_ALS	SX_IB_20220518_11_51_SS_Primary_ALS	SX_IB_20220518_15_51_SS_Triplicate_ALS	
Sampling date / time				18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51		
Compound	CAS Number	LOR	Unit	EM2209314-001	EM2209314-002	EM2209314-003	EM2209314-006	EM2209314-007		
				Result	Result	Result	Result	Result		
EP075I: Organochlorine Pesticides - Continued										
^ Sum of other organochlorine pesticides				----	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction				----	20	mg/kg	<20	<20	<20	<20
C10 - C14 Fraction				----	50	mg/kg	<50	<50	<50	<50
C6 - C10 Fraction				C6_C10	20	mg/kg	<20	<20	<20	<20
C15 - C28 Fraction				----	100	mg/kg	<100	<100	<100	<100
C29 - C36 Fraction				----	100	mg/kg	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)				----	50	mg/kg	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions										
>C10 - C16 Fraction				----	50	mg/kg	<50	<50	<50	<50
>C16 - C34 Fraction				----	100	mg/kg	<100	<100	<100	<100
>C34 - C40 Fraction				----	100	mg/kg	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)				----	50	mg/kg	<50	<50	<50	<50
>C10 - C16 Fraction minus Naphthalene (F2)				----	50	mg/kg	<50	<50	<50	<50
C6 - C10 Fraction minus BTEX (F1)				C6_C10-BTEX	20	mg/kg	<20	<20	<20	<20
EP231A: Perfluoroalkyl Sulfonic Acids										
Perfluorobutane sulfonic acid (PFBS)				375-73-5	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
Perfluoropentane sulfonic acid (PFPeS)				2706-91-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
Perfluorohexane sulfonic acid (PFHxS)				355-46-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
Perfluoroheptane sulfonic acid (PFHpS)				375-92-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
Perfluorooctane sulfonic acid (PFOS)				1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
Perfluorodecane sulfonic acid (PFDS)				335-77-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
EP231B: Perfluoroalkyl Carboxylic Acids										
Perfluorobutanoic acid (PFBA)				375-22-4	5	µg/kg	<5	<5	<5	<5
Perfluoropentanoic acid (PFPeA)				2706-90-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
Perfluorohexanoic acid (PFHxA)				307-24-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0
Perfluoroheptanoic acid (PFHpA)				375-85-9	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_IB_20220518_07_55_SS_Primary_ALS	SX_IB_20220518_07_56_SS_Duplicate_ALS	SX_OB_20220518_08_05_SS_Primary_ALS	SX_IB_20220518_11_51_SS_Primary_ALS	SX_IB_20220518_15_51_SS_Triplicate_ALS
Sampling date / time				18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51	
Compound	CAS Number	LOR	Unit	EM2209314-001	EM2209314-002	EM2209314-003	EM2209314-006	EM2209314-007	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
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									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_IB_20220518_07_55_SS_Primary_ALS	SX_IB_20220518_07_56_SS_Duplicate_ALS	SX_OB_20220518_08_05_SS_Primary_ALS	SX_IB_20220518_11_51_SS_Primary_ALS	SX_IB_20220518_15_51_SS_Triplicate_ALS
Sampling date / time				18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51	
Compound	CAS Number	LOR	Unit	EM2209314-001	EM2209314-002	EM2209314-003	EM2209314-006	EM2209314-007	
				Result	Result	Result	Result	Result	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
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	%	81.8	92.3	77.7	86.1	78.9	
EP074S: VOC Surrogates (Ultra-Trace)									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	94.9	98.1	95.5	83.0	92.5	
Toluene-D8	2037-26-5	0.1	%	96.5	90.2	93.3	81.5	94.2	
4-Bromofluorobenzene	460-00-4	0.1	%	107	104	101	93.7	102	
EP075S: Acid Extractable Surrogates (Waste Classification)									
Phenol-d6	13127-88-3	0.025	%	79.8	91.6	76.3	85.4	77.4	
2-Chlorophenol-D4	93951-73-6	0.025	%	76.5	87.7	73.4	82.6	74.4	
2,4,6-Tribromophenol	118-79-6	0.025	%	65.2	74.9	62.9	73.4	64.5	
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)									
Nitrobenzene-D5	4165-60-0	0.025	%	83.0	94.3	78.4	86.8	81.2	
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	73.0	84.4	71.4	80.0	71.4	
2-Fluorobiphenyl	321-60-8	0.025	%	87.1	99.0	82.6	92.8	85.1	
Anthracene-d10	1719-06-8	0.025	%	74.0	83.7	70.4	78.9	72.2	
4-Terphenyl-d14	1718-51-0	0.025	%	83.9	95.9	80.9	92.3	82.4	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%	87.1	96.9	101	83.4	94.4	
13C8-PFOA	----	0.0002	%	92.7	105	98.8	92.0	106	



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)		Sample ID			SX_IB_20220518_15_54_SS_Primary_ALS	SX_OB_20220518_16_01_SS_Primary_ALS	SX_IB_20220518_23_55_SS_Primary_ALS	SX_IB_20220519_04_11_SS_Primary_ALS	SX_IB_20220518_07_55_SS_Primary_ALS
		Sampling date / time			18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	18-May-2022 07:55
Compound	CAS Number	LOR	Unit	EM2209314-008	EM2209314-009	EM2209314-010	EM2209314-011	EM2209314-012	
				Result	Result	Result	Result	Result	
EA001: pH in soil using 0.01M CaCl extract									
pH (CaCl ₂)	----	0.1	pH Unit	7.8	8.1	7.8	7.8	----	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%	29.3	33.7	22.6	26.3	----	
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg	33	30	14	18	----	
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	----	
Chromium	7440-47-3	5	mg/kg	116	98	94	124	----	
Copper	7440-50-8	5	mg/kg	56	58	50	65	----	
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	----	
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	<5	----	
Nickel	7440-02-0	5	mg/kg	182	149	144	187	----	
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	----	
Silver	7440-22-4	2	mg/kg	<2	<2	<2	<2	----	
Tin	7440-31-5	10	mg/kg	<10	<10	<10	<10	----	
Zinc	7440-66-6	5	mg/kg	89	100	71	92	----	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----	
EG048: Hexavalent Chromium (Alkaline Digest)									
Hexavalent Chromium	18540-29-9	1.0	mg/kg	1.1	<1.0	<1.0	1.1	----	
EK026SF: Total CN by Segmented Flow Analyser									
Total Cyanide	57-12-5	5	mg/kg	<5	<5	<5	<5	----	
EK040T: Fluoride Total									
Fluoride	16984-48-8	100	mg/kg	200	140	270	250	----	
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)									
Initial pH	----	0.1	pH Unit	9.3	9.0	8.9	8.6	----	
After HCl pH	----	0.1	pH Unit	1.4	1.4	1.4	1.4	----	
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	5.0	----	
Final pH	----	0.1	pH Unit	5.1	5.1	5.1	5.1	----	
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)									
Final pH	----	0.1	pH Unit	----	----	----	----	9.5	
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----	
EP074A: Monocyclic Aromatic Hydrocarbons									



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220518_15_54_SS_Primary_ALS	SX_OB_20220518_16_01_SS_Primary_ALS	SX_IB_20220518_23_55_SS_Primary_ALS	SX_IB_20220519_04_11_SS_Primary_ALS	SX_IB_20220518_07_55_SS_Primary_ALS
Sampling date / time				18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	18-May-2022 07:55
Compound	CAS Number	LOR	Unit	EM2209314-008	EM2209314-009	EM2209314-010	EM2209314-011	EM2209314-012
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	<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	----
1,1-Dichloroethene	75-35-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
trans-1,2-Dichloroethene	156-60-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
cis-1,2-Dichloroethene	156-59-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Chloroform	67-66-3	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,1,1-Trichloroethane	71-55-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Carbon Tetrachloride	56-23-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,2-Dichloroethane	107-06-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Trichloroethene	79-01-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,1,2-Trichloroethane	79-00-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Tetrachloroethene	127-18-4	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,1,1,2-Tetrachloroethane	630-20-6	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,1,2,2-Tetrachloroethane	79-34-5	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Hexachlorobutadiene	87-68-3	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
Chlorobenzene	108-90-7	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,4-Dichlorobenzene	106-46-7	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,2-Dichlorobenzene	95-50-1	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
1,2,4-Trichlorobenzene	120-82-1	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
^ Sum of volatile chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
^ Sum of other chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
EP075A: Phenolic Compounds (Halogenated)								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220518_15_54_SS_Primary_ALS	SX_OB_20220518_16_01_SS_Primary_ALS	SX_IB_20220518_23_55_SS_Primary_ALS	SX_IB_20220519_04_11_SS_Primary_ALS	SX_IB_20220518_07_55_SS_Primary_ALS
Sampling date / time				18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	18-May-2022 07:55
Compound	CAS Number	LOR	Unit	EM2209314-008	EM2209314-009	EM2209314-010	EM2209314-011	EM2209314-012
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Halogenated) - Continued								
2-Chlorophenol	95-57-8	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
2,4-Dichlorophenol	120-83-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
2,6-Dichlorophenol	87-65-0	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	----
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	----
2,4,5-Trichlorophenol	95-95-4	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	----
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	----
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	----
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	----
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	----
EP075A: Phenolic Compounds (Non-halogenated)								
Phenol	108-95-2	1	mg/kg	<1	<1	<1	<1	----
2-Methylphenol	95-48-7	1	mg/kg	<1	<1	<1	<1	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	----
2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	<1	<1	----
2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	<1	<1	----
2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	<5	<5	----
4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	<5	<5	----
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	<5	<5	----
Dinoseb	88-85-7	20	mg/kg	<20	<20	<20	<20	----
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	20	mg/kg	<20	<20	<20	<20	----
^ Sum of Phenols (non-halogenated)	----	20	mg/kg	<20	<20	<20	<20	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220518_15_54_SS_Primary_ALS	SX_OB_20220518_16_01_SS_Primary_ALS	SX_IB_20220518_23_55_SS_Primary_ALS	SX_IB_20220519_04_11_SS_Primary_ALS	SX_IB_20220518_07_55_SS_Primary_ALS
Sampling date / time				18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	18-May-2022 07:55
Compound	CAS Number	LOR	Unit	EM2209314-008	EM2209314-009	EM2209314-010	EM2209314-011	EM2209314-012
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(b+) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	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	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	----
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	----
Endosulfan 1	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endosulfan 2	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4,4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Methoxychlor	72-43-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
^ Sum of organochlorine pesticides	----	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.30	mg/kg	<0.30	<0.30	<0.30	<0.30	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_IB_20220518_15_54_SS_Primary_ALS	SX_OB_20220518_16_01_SS_Primary_ALS	SX_IB_20220518_23_55_SS_Primary_ALS	SX_IB_20220519_04_11_SS_Primary_ALS	SX_IB_20220518_07_55_SS_Primary_ALS
Sampling date / time				18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	18-May-2022 07:55	
Compound	CAS Number	LOR	Unit	EM2209314-008	EM2209314-009	EM2209314-010	EM2209314-011	EM2209314-012	
				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	----	
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	----	
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	----	
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	mg/kg	<20	<20	<20	<20	----	
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	----	
C6 - C10 Fraction	C6_C10	20	mg/kg	<20	<20	<20	<20	----	
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	----	
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	----	
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	----	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	----	
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	----	
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	----	
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	----	
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	----	
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	mg/kg	<20	<20	<20	<20	----	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	5	µg/kg	<5	<5	<5	<5	----	



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220518_15_54_SS_Primary_ALS	SX_OB_20220518_16_01_SS_Primary_ALS	SX_IB_20220518_23_55_SS_Primary_ALS	SX_IB_20220519_04_11_SS_Primary_ALS	SX_IB_20220518_07_55_SS_Primary_ALS
Sampling date / time				18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	18-May-2022 07:55
Compound	CAS Number	LOR	Unit	EM2209314-008	EM2209314-009	EM2209314-010	EM2209314-011	EM2209314-012
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluoropentanoic acid (PFPeA)	2706-90-3	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
Perfluorohexanoic acid (PFHxA)	307-24-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
Perfluorooctanoic acid (PFOA)	335-67-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
Perfluorononanoic acid (PFNA)	375-95-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
Perfluorodecanoic acid (PFDA)	335-76-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_IB_20220518_15_54_SS_Primary_ALS	SX_OB_20220518_16_01_SS_Primary_ALS	SX_IB_20220518_23_55_SS_Primary_ALS	SX_IB_20220519_04_11_SS_Primary_ALS	SX_IB_20220518_07_55_SS_Primary_ALS
Sampling date / time				18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	18-May-2022 07:55	
Compound	CAS Number	LOR	Unit	EM2209314-008	EM2209314-009	EM2209314-010	EM2209314-011	EM2209314-012	
				Result	Result	Result	Result	Result	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
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	%	73.9	86.3	87.9	80.1	80.1	----
EP074S: VOC Surrogates (Ultra-Trace)									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	90.6	69.2	99.1	84.7	84.7	----
Toluene-D8	2037-26-5	0.1	%	91.2	65.2	98.8	84.2	84.2	----
4-Bromofluorobenzene	460-00-4	0.1	%	99.3	87.3	105	89.2	89.2	----
EP075S: Acid Extractable Surrogates (Waste Classification)									
Phenol-d6	13127-88-3	0.025	%	73.2	85.5	86.1	76.4	76.4	----
2-Chlorophenol-D4	93951-73-6	0.025	%	71.1	82.3	83.6	74.4	74.4	----
2,4,6-Tribromophenol	118-79-6	0.025	%	60.4	70.7	71.1	62.6	62.6	----
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)									
Nitrobenzene-D5	4165-60-0	0.025	%	75.1	87.8	88.2	79.4	79.4	----
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	67.9	79.2	79.3	70.6	70.6	----
2-Fluorobiphenyl	321-60-8	0.025	%	80.3	92.3	94.0	84.2	84.2	----
Anthracene-d10	1719-06-8	0.025	%	68.0	78.8	79.3	71.6	71.6	----
4-Terphenyl-d14	1718-51-0	0.025	%	77.7	92.6	90.6	82.3	82.3	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%	94.2	123	98.3	118	118	----
13C8-PFOA	----	0.0002	%	99.7	108	95.8	110	110	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220518_07_56_SS_Duplicate_ALS	SX_OB_20220518_08_05_SS_Primary_ALS	SX_IB_20220518_11_51_SS_Primary_ALS	SX_IB_20220518_15_51_SS_Triplicate_ALS	SX_IB_20220518_15_54_SS_Primary_ALS
Sampling date / time				18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51	18-May-2022 15:54
Compound	CAS Number	LOR	Unit	EM2209314-013	EM2209314-014	EM2209314-015	EM2209314-016	EM2209314-017
				Result	Result	Result	Result	Result
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Final pH	----	0.1	pH Unit	9.5	9.8	9.7	10.1	9.7



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_OB_20220518_16_01_SS_Primary_ALS	SX_IB_20220518_23_55_SS_Primary_ALS	SX_IB_20220519_04_11_SS_Primary_ALS	----	----
Sampling date / time				18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	----	----	
Compound	CAS Number	LOR	Unit	EM2209314-018	EM2209314-019	EM2209314-020	-----	-----	
				Result	Result	Result	----	----	
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)									
Final pH	----	0.1	pH Unit	9.5	9.6	9.6	----	----	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID		SX_OB_20220518_08 22_SR_Rinsate_ALS	SX_OB_20220518_08 23_SB_Blank_ALS	----	----	----
Sampling date / time			18-May-2022 08:22		18-May-2022 08:23		----	----	----
Compound	CAS Number	LOR	Unit	EM2209314-004	EM2209314-005	-----	-----	-----	
				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	0.10	µg/L	<0.10	<0.10	----	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SX_OB_20220518_08 _22_SR_Rinsate_ALS	SX_OB_20220518_08 _23_SB_Blank_ALS	----	----	----
Sampling date / time				18-May-2022 08:22	18-May-2022 08:23	----	----	----	
Compound	CAS Number	LOR	Unit	EM2209314-004	EM2209314-005	-----	-----	-----	
				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	0.02	µg/L	<0.02	<0.02	----	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	----	----	----	
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	----	0.01	µg/L	<0.01	<0.01	----	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----	
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	----	----	----	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%	85.0	89.2	----	----	----	
13C8-PFOA	----	0.02	%	103	98.7	----	----	----	



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

Automated Guideline Comparison Report

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

Work Order	: EM2209314	Page	: 1 of 27
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: DAVID LAWSON		
Address	: D1.1 63-85 TURNER STREET PORT MELBOURNE 3207	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: david.lawson@agonenviro.com.au	E-mail	: Josh.Alexander@alsglobal.com
Telephone	: ----	Telephone	: +61-3-8549 9600
Facsimile	: ----	Facsimile	: +61-3-8549 9626
Project	: JC0927	Date Received	: 19-May-2022 11:55
Order number	: ----	Date Analysed	: 20-May-2022
C-O-C number	: 20220519044335-ALS-21	Date Issued	: 26-May-2022 19:57
No. of samples received	: 20		
No. of samples analysed	: 20	Quote number	: EN/150/19 -WGTP -Bulk Sample Quote

General Comments

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

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

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

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

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



Summary of Thresholds Reached or Exceeded

EPA Victoria Publication IWRG 621 (2009)

Table 2: Soil Hazard Categorisation Thresholds : Fill Material

Client Sample ID	ALS Sample ID	Compound	Method	LOR	Limits	Result
SX_IB_20220518_07_55_S S_Primary_ALS	EM2209314-001	Arsenic	EG005T	5	< 20 mg/kg	27 mg/kg
SX_IB_20220518_07_55_S S_Primary_ALS	EM2209314-001	Nickel	EG005T	5	< 60 mg/kg	179 mg/kg
SX_IB_20220518_07_55_S S_Primary_ALS	EM2209314-001	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	1.8 mg/kg
SX_IB_20220518_07_56_S S_Duplicate_ALS	EM2209314-002	Arsenic	EG005T	5	< 20 mg/kg	20 mg/kg
SX_IB_20220518_07_56_S S_Duplicate_ALS	EM2209314-002	Nickel	EG005T	5	< 60 mg/kg	174 mg/kg
SX_IB_20220518_07_56_S S_Duplicate_ALS	EM2209314-002	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	1.2 mg/kg
SX_OB_20220518_08_05_ SS_Primary_ALS	EM2209314-003	Arsenic	EG005T	5	< 20 mg/kg	23 mg/kg
SX_OB_20220518_08_05_ SS_Primary_ALS	EM2209314-003	Nickel	EG005T	5	< 60 mg/kg	201 mg/kg
SX_IB_20220518_11_51_S S_Primary_ALS	EM2209314-006	Arsenic	EG005T	5	< 20 mg/kg	27 mg/kg
SX_IB_20220518_11_51_S S_Primary_ALS	EM2209314-006	Nickel	EG005T	5	< 60 mg/kg	170 mg/kg
SX_IB_20220518_15_51_S S_Triplicate_ALS	EM2209314-007	Arsenic	EG005T	5	< 20 mg/kg	29 mg/kg
SX_IB_20220518_15_51_S S_Triplicate_ALS	EM2209314-007	Nickel	EG005T	5	< 60 mg/kg	157 mg/kg
SX_IB_20220518_15_51_S S_Triplicate_ALS	EM2209314-007	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	1.2 mg/kg
SX_IB_20220518_15_54_S S_Primary_ALS	EM2209314-008	Arsenic	EG005T	5	< 20 mg/kg	33 mg/kg
SX_IB_20220518_15_54_S S_Primary_ALS	EM2209314-008	Nickel	EG005T	5	< 60 mg/kg	182 mg/kg
SX_IB_20220518_15_54_S S_Primary_ALS	EM2209314-008	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	1.1 mg/kg
SX_OB_20220518_16_01_ SS_Primary_ALS	EM2209314-009	Arsenic	EG005T	5	< 20 mg/kg	30 mg/kg
SX_OB_20220518_16_01_ SS_Primary_ALS	EM2209314-009	Nickel	EG005T	5	< 60 mg/kg	149 mg/kg
SX_IB_20220518_23_55_S S_Primary_ALS	EM2209314-010	Nickel	EG005T	5	< 60 mg/kg	144 mg/kg

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Work Order : EM2209314
Client : AGON ENVIRONMENTAL PTY LTD
Project : JC0927



EPA Victoria Publication IWRG 621 (2009)

Table 2: Soil Hazard Categorisation Thresholds : Fill Material

Client Sample ID	ALS Sample ID	Compound	Method	LOR	Limits	Result
SX_IB_20220519_04_11_S S_Primary_ALS	EM2209314-011	Nickel	EG005T	5	< 60 mg/kg	187 mg/kg
SX_IB_20220519_04_11_S S_Primary_ALS	EM2209314-011	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	1.1 mg/kg



Analytical Results

Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		Guideline Lower Limit	Guideline Upper Limit	SX_IB_20220	SX_IB_20220	SX_OB_20220	SX_IB_20220	SX_IB_20220
				Sampling date/time				518_07_55_S	518_07_56_S	518_08_05_S	518_11_51_S	518_15_51_S
								S_Primary_AL S	S_Duplicate_ ALS	S_Primary_AL S	S_Primary_AL S	S_Triplicate_ ALS
							18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51	
							EM2209314-001 MU	EM2209314-002 MU	EM2209314-003 MU	EM2209314-006 MU	EM2209314-007 MU	
EA001: pH in soil using 0.01M CaCl extract												
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5		7.7 ± 0.1	7.7 ± 0.1	8.0 ± 0.1	8.0 ± 0.1	8.5 ± 0.1	
EG005(ED093)T: Total Metals by ICP-AES												
Arsenic	EG005T	5	mg/kg	----	2000		27 ± 4	20 ± 3	23 ± 3	27 ± 4	29 ± 4	
Cadmium	EG005T	1	mg/kg	----	400		<1 --	<1 --	<1 --	<1 --	<1 --	
Copper	EG005T	5	mg/kg	----	20000		61 ± 8	56 ± 7	67 ± 8	56 ± 7	52 ± 6	
Lead	EG005T	5	mg/kg	----	6000		<5 --	<5 --	<5 --	<5 --	<5 --	
Molybdenum	EG005T	5	mg/kg	----	4000		<5 --	<5 --	<5 --	<5 --	<5 --	
Nickel	EG005T	5	mg/kg	----	12000		179 ± 18	174 ± 17	201 ± 20	170 ± 17	157 ± 15	
Selenium	EG005T	5	mg/kg	----	200		<5 --	<5 --	<5 --	<5 --	<5 --	
Silver	EG005T	2	mg/kg	----	720		<2 --	<2 --	<2 --	<2 --	<2 --	
Zinc	EG005T	5	mg/kg	----	140000		82 ± 9	82 ± 9	112 ± 12	90 ± 10	83 ± 9	
EG035T: Total Recoverable Mercury by FIMS												
Mercury	EG035T	0.1	mg/kg	----	300		<0.1 --	<0.1 --	<0.1 --	<0.1 --	<0.1 --	
EG048: Hexavalent Chromium (Alkaline Digest)												
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000		1.8 ± 0.3	1.2 ± 0.2	<1.0 --	<1.0 --	1.2 ± 0.2	
EK026SF: Total CN by Segmented Flow Analyser												
Total Cyanide	EK026SF	5	mg/kg	----	10000		<5 --	<5 --	<5 --	<5 --	<5 --	
EK040T: Fluoride Total												
Fluoride	EK040T	100	mg/kg	----	40000		260 ± 50	250 ± 50	190 ± 40	220 ± 40	220 ± 40	
EP074A: Monocyclic Aromatic Hydrocarbons												
Benzene	EP074-UT	0.2	mg/kg	----	16		<0.2 --	<0.2 --	<0.2 --	<0.2 --	<0.2 --	
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	240		<0.5 --	<0.5 --	<0.5 --	<0.5 --	<0.5 --	
EP074I: Volatile Halogenated Compounds												
Vinyl chloride	EP074-UT	0.50	mg/kg	----	4.8		<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --	
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	11		<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --	
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	50		<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --	
EP075A: Phenolic Compounds (Halogenated)												
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	320		<1.00 --	<1.00 --	<1.00 --	<1.00 --	<1.00 --	



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_IB_20220	SX_OB_20220	SX_IB_20220	SX_IB_20220
				Guideline	Guideline	518_07_55_S	518_07_56_S	518_08_05_S	518_11_51_S	518_15_51_S
						S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Primary_ALS	S_Triplicate_ALS
				Lower Limit	Upper Limit	18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51
						EM2209314-001 MU	EM2209314-002 MU	EM2209314-003 MU	EM2209314-006 MU	EM2209314-007 MU
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	400	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP075I: Organochlorine Pesticides										
Heptachlor	EP075-EM	0.05	mg/kg	----	4.8	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	4.8	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	16	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	50	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	2600	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	40000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220 518_07_55_S S_Primary_AL S	SX_IB_20220 518_07_56_S S_Duplicate_ ALS	SX_OB_20220 518_08_05_S S_Primary_AL S	SX_IB_20220 518_11_51_S S_Primary_AL S	SX_IB_20220 518_15_51_S S_Triplicate_ ALS
				Guideline	Guideline	18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51
				Lower Limit	Upper Limit	EM2209314-001 MU	EM2209314-002 MU	EM2209314-003 MU	EM2209314-006 MU	EM2209314-007 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.7 ±0.1	7.7 ±0.1	8.0 ±0.1	8.0 ±0.1	8.5 ±0.1
EG005(ED093)T: Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	500	27 ±4	20 ±3	23 ±3	27 ±4	29 ±4
Cadmium	EG005T	1	mg/kg	----	100	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..
Copper	EG005T	5	mg/kg	----	5000	61 ±8	56 ±7	67 ±8	56 ±7	52 ±6
Lead	EG005T	5	mg/kg	----	1500	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Molybdenum	EG005T	5	mg/kg	----	1000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Nickel	EG005T	5	mg/kg	----	3000	179 ±18	174 ±17	201 ±20	170 ±17	157 ±15
Selenium	EG005T	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Silver	EG005T	2	mg/kg	----	180	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..
Tin	EG005T	10	mg/kg	----	500	<10 ..	<10 ..	<10 ..	<10 ..	<10 ..
Zinc	EG005T	5	mg/kg	----	35000	82 ±9	82 ±9	112 ±12	90 ±10	83 ±9
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	1.8 ±0.3	1.2 ±0.2	<1.0 ..	<1.0 ..	1.2 ±0.2
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	10000	260 ±50	250 ±50	190 ±40	220 ±40	220 ±40
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	4	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	70	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP074I: Volatile Halogenated Compounds										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	1.2	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	2.8	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	10	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	10	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_IB_20220	SX_OB_20220	SX_IB_20220	SX_IB_20220
				Guideline	Guideline	518_07_55_S	518_07_56_S	518_08_05_S	518_11_51_S	518_15_51_S
						S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Primary_ALS	S_Triplicate_ALS
				Lower Limit	Upper Limit	18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51
						EM2209314-001 MU	EM2209314-002 MU	EM2209314-003 MU	EM2209314-006 MU	EM2209314-007 MU
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	560	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	5	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	100	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP075I: Organochlorine Pesticides										
Heptachlor	EP075-EM	0.05	mg/kg	----	1.2	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	1.2	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	4	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	10	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	650	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	10000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220 518_07_55_S S_Primary_AL S	SX_IB_20220 518_07_56_S S_Duplicate_ ALS	SX_OB_20220 518_08_05_S S_Primary_AL S	SX_IB_20220 518_11_51_S S_Primary_AL S	SX_IB_20220 518_15_51_S S_Triplicate_ ALS
				Guideline	Guideline	18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51
				Lower Limit	Upper Limit	EM2209314-001 MU	EM2209314-002 MU	EM2209314-003 MU	EM2209314-006 MU	EM2209314-007 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.7 ±0.1	7.7 ±0.1	8.0 ±0.1	8.0 ±0.1	8.5 ±0.1
EG005(ED093)T: Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	20	27 ±4	20 ±3	23 ±3	27 ±4	29 ±4
Cadmium	EG005T	1	mg/kg	----	3	<1 ..	<1 ..	<1 ..	<1 ..	<1 ..
Copper	EG005T	5	mg/kg	----	100	61 ±8	56 ±7	67 ±8	56 ±7	52 ±6
Lead	EG005T	5	mg/kg	----	300	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Molybdenum	EG005T	5	mg/kg	----	40	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Nickel	EG005T	5	mg/kg	----	60	179 ±18	174 ±17	201 ±20	170 ±17	157 ±15
Selenium	EG005T	5	mg/kg	----	10	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Silver	EG005T	2	mg/kg	----	10	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..
Tin	EG005T	10	mg/kg	----	50	<10 ..	<10 ..	<10 ..	<10 ..	<10 ..
Zinc	EG005T	5	mg/kg	----	200	82 ±9	82 ±9	112 ±12	90 ±10	83 ±9
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	1.8 ±0.3	1.2 ±0.2	<1.0 ..	<1.0 ..	1.2 ±0.2
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	450	260 ±50	250 ±50	190 ±40	220 ±40	220 ±40
EP066: Polychlorinated Biphenyls (PCB)										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	1	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	7	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP074I: Volatile Halogenated Compounds										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..
EP075A: Phenolic Compounds (Non-halogenated)										



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_IB_20220	SX_OB_20220	SX_IB_20220	SX_IB_20220
				Guideline	Guideline	518_07_55_S	518_07_56_S	518_08_05_S	518_11_51_S	518_15_51_S
						S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Primary_ALS	S_Triplicate_ALS
				Lower Limit	Upper Limit	18-May-2022 07:55	18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51
						EM2209314-001 MU	EM2209314-002 MU	EM2209314-003 MU	EM2209314-006 MU	EM2209314-007 MU
EP075A: Phenolic Compounds (Non-halogenated) - Continued										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	60	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	1	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP075I: Organochlorine Pesticides										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	100	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	1000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_OB_20220	SX_IB_20220	SX_IB_20220	SX_IB_20220	
				Sampling date/time	Guideline	Guideline	518_15_54_S	518_16_01_S	518_23_55_S	519_04_11_S	518_07_55_S
							S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	18-May-2022 07:55	
						EM2209314-008 MU	EM2209314-009 MU	EM2209314-010 MU	EM2209314-011 MU	EM2209314-012 MU	
EA001: pH in soil using 0.01M CaCl extract											
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5	7.8 ± 0.1	8.1 ± 0.1	7.8 ± 0.1	7.8 ± 0.1	----	
EG005(ED093)T: Total Metals by ICP-AES											
Arsenic	EG005T	5	mg/kg	----	2000	33 ± 4	30 ± 4	14 ± 2	18 ± 3	----	
Cadmium	EG005T	1	mg/kg	----	400	<1 ..	<1 ..	<1 ..	<1 ..	----	
Copper	EG005T	5	mg/kg	----	20000	56 ± 7	58 ± 7	50 ± 6	65 ± 8	----	
Lead	EG005T	5	mg/kg	----	6000	<5 ..	<5 ..	<5 ..	<5 ..	----	
Molybdenum	EG005T	5	mg/kg	----	4000	<5 ..	<5 ..	<5 ..	<5 ..	----	
Nickel	EG005T	5	mg/kg	----	12000	182 ± 18	149 ± 15	144 ± 14	187 ± 18	----	
Selenium	EG005T	5	mg/kg	----	200	<5 ..	<5 ..	<5 ..	<5 ..	----	
Silver	EG005T	2	mg/kg	----	720	<2 ..	<2 ..	<2 ..	<2 ..	----	
Zinc	EG005T	5	mg/kg	----	140000	89 ± 10	100 ± 11	71 ± 8	92 ± 10	----	
EG035T: Total Recoverable Mercury by FIMS											
Mercury	EG035T	0.1	mg/kg	----	300	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	----	
EG048: Hexavalent Chromium (Alkaline Digest)											
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000	1.1 ± 0.2	<1.0 ..	<1.0 ..	1.1 ± 0.2	----	
EK026SF: Total CN by Segmented Flow Analyser											
Total Cyanide	EK026SF	5	mg/kg	----	10000	<5 ..	<5 ..	<5 ..	<5 ..	----	
EK040T: Fluoride Total											
Fluoride	EK040T	100	mg/kg	----	40000	200 ± 40	140 ± 30	270 ± 50	250 ± 50	----	
EP074A: Monocyclic Aromatic Hydrocarbons											
Benzene	EP074-UT	0.2	mg/kg	----	16	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	----	
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	240	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----	
EP074I: Volatile Halogenated Compounds											
Vinyl chloride	EP074-UT	0.50	mg/kg	----	4.8	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	----	
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	11	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	----	
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	50	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	----	
EP075A: Phenolic Compounds (Halogenated)											
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	320	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	----	
EP075A: Phenolic Compounds (Non-halogenated)											



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_OB_20220	SX_IB_20220	SX_IB_20220	SX_IB_20220	
				Sampling date/time	Guideline	Guideline	518_15_54_S	518_16_01_S	518_23_55_S	519_04_11_S	518_07_55_S
							S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	18-May-2022 07:55	
						EM2209314-008 MU	EM2209314-009 MU	EM2209314-010 MU	EM2209314-011 MU	EM2209314-012 MU	
EP075A: Phenolic Compounds (Non-halogenated) - Continued											
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 ..	<20 ..	<20 ..	<20 ..	----	
EP075B: Polynuclear Aromatic Hydrocarbons											
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----	
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	400	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----	
EP075I: Organochlorine Pesticides											
Heptachlor	EP075-EM	0.05	mg/kg	----	4.8	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	----	
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	4.8	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	----	
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	----	
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	16	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	----	
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	50	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	----	
EP080/071: Total Petroleum Hydrocarbons											
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	2600	<20 ..	<20 ..	<20 ..	<20 ..	----	
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	40000	<50 ..	<50 ..	<50 ..	<50 ..	----	



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_OB_20220	SX_IB_20220	SX_IB_20220	SX_IB_20220	
				Sampling date/time	Guideline	Guideline	518_15_54_S	518_16_01_S	518_23_55_S	519_04_11_S	518_07_55_S
							S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	18-May-2022 07:55	
						EM2209314-008 MU	EM2209314-009 MU	EM2209314-010 MU	EM2209314-011 MU	EM2209314-012 MU	
EA001: pH in soil using 0.01M CaCl extract											
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.8 ±0.1	8.1 ±0.1	7.8 ±0.1	7.8 ±0.1	----	
EG005(ED093)T: Total Metals by ICP-AES											
Arsenic	EG005T	5	mg/kg	----	500	33 ±4	30 ±4	14 ±2	18 ±3	----	
Cadmium	EG005T	1	mg/kg	----	100	<1 ..	<1 ..	<1 ..	<1 ..	----	
Copper	EG005T	5	mg/kg	----	5000	56 ±7	58 ±7	50 ±6	65 ±8	----	
Lead	EG005T	5	mg/kg	----	1500	<5 ..	<5 ..	<5 ..	<5 ..	----	
Molybdenum	EG005T	5	mg/kg	----	1000	<5 ..	<5 ..	<5 ..	<5 ..	----	
Nickel	EG005T	5	mg/kg	----	3000	182 ±18	149 ±15	144 ±14	187 ±18	----	
Selenium	EG005T	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	----	
Silver	EG005T	2	mg/kg	----	180	<2 ..	<2 ..	<2 ..	<2 ..	----	
Tin	EG005T	10	mg/kg	----	500	<10 ..	<10 ..	<10 ..	<10 ..	----	
Zinc	EG005T	5	mg/kg	----	35000	89 ±10	100 ±11	71 ±8	92 ±10	----	
EG035T: Total Recoverable Mercury by FIMS											
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	----	
EG048: Hexavalent Chromium (Alkaline Digest)											
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	1.1 ±0.2	<1.0 ..	<1.0 ..	1.1 ±0.2	----	
EK026SF: Total CN by Segmented Flow Analyser											
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 ..	<5 ..	<5 ..	<5 ..	----	
EK040T: Fluoride Total											
Fluoride	EK040T	100	mg/kg	----	10000	200 ±40	140 ±30	270 ±50	250 ±50	----	
EP074A: Monocyclic Aromatic Hydrocarbons											
Benzene	EP074-UT	0.2	mg/kg	----	4	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	----	
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	70	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----	
EP074I: Volatile Halogenated Compounds											
Vinyl chloride	EP074-UT	0.50	mg/kg	----	1.2	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	----	
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	2.8	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	----	
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	10	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	----	
EP075A: Phenolic Compounds (Halogenated)											
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	10	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	----	



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_OB_20220	SX_IB_20220	SX_IB_20220	SX_IB_20220
				Guideline	Guideline	518_15_54_S	518_16_01_S	518_23_55_S	519_04_11_S	518_07_55_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	18-May-2022 07:55
						EM2209314-008 MU	EM2209314-009 MU	EM2209314-010 MU	EM2209314-011 MU	EM2209314-012 MU
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	560	<20 ..	<20 ..	<20 ..	<20 ..	----
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	5	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	100	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----
EP075I: Organochlorine Pesticides										
Heptachlor	EP075-EM	0.05	mg/kg	----	1.2	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	----
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	1.2	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	----
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	----
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	4	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	----
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	10	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	----
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	650	<20 ..	<20 ..	<20 ..	<20 ..	----
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	10000	<50 ..	<50 ..	<50 ..	<50 ..	----



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_OB_20220	SX_IB_20220	SX_IB_20220	SX_IB_20220
				Lower Limit	Upper Limit	518_15_54_S	518_16_01_S	518_23_55_S	519_04_11_S	518_07_55_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
						18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	18-May-2022 07:55
						EM2209314-008 MU	EM2209314-009 MU	EM2209314-010 MU	EM2209314-011 MU	EM2209314-012 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.8 ±0.1	8.1 ±0.1	7.8 ±0.1	7.8 ±0.1	----
EG005(ED093)T: Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	20	33 ±4	30 ±4	14 ±2	18 ±3	----
Cadmium	EG005T	1	mg/kg	----	3	<1 ..	<1 ..	<1 ..	<1 ..	----
Copper	EG005T	5	mg/kg	----	100	56 ±7	58 ±7	50 ±6	65 ±8	----
Lead	EG005T	5	mg/kg	----	300	<5 ..	<5 ..	<5 ..	<5 ..	----
Molybdenum	EG005T	5	mg/kg	----	40	<5 ..	<5 ..	<5 ..	<5 ..	----
Nickel	EG005T	5	mg/kg	----	60	182 ±18	149 ±15	144 ±14	187 ±18	----
Selenium	EG005T	5	mg/kg	----	10	<5 ..	<5 ..	<5 ..	<5 ..	----
Silver	EG005T	2	mg/kg	----	10	<2 ..	<2 ..	<2 ..	<2 ..	----
Tin	EG005T	10	mg/kg	----	50	<10 ..	<10 ..	<10 ..	<10 ..	----
Zinc	EG005T	5	mg/kg	----	200	89 ±10	100 ±11	71 ±8	92 ±10	----
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	----
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	1.1 ±0.2	<1.0 ..	<1.0 ..	1.1 ±0.2	----
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	----
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	450	200 ±40	140 ±30	270 ±50	250 ±50	----
EP066: Polychlorinated Biphenyls (PCB)										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	----
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	1	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	7	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----
EP074I: Volatile Halogenated Compounds										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	----
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	----
EP075A: Phenolic Compounds (Non-halogenated)										



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_OB_20220	SX_IB_20220	SX_IB_20220	SX_IB_20220
				Guideline	Guideline	518_15_54_S	518_16_01_S	518_23_55_S	519_04_11_S	518_07_55_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Primary_ALS
Sampling date/time				Lower Limit	Upper Limit	18-May-2022 15:54	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11	18-May-2022 07:55
						EM2209314-008 MU	EM2209314-009 MU	EM2209314-010 MU	EM2209314-011 MU	EM2209314-012 MU
EP075A: Phenolic Compounds (Non-halogenated) - Continued										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	60	<20 ..	<20 ..	<20 ..	<20 ..	----
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	1	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	----
EP075I: Organochlorine Pesticides										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	----
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	100	<20 ..	<20 ..	<20 ..	<20 ..	----
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	1000	<50 ..	<50 ..	<50 ..	<50 ..	----



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220 518_07_56_S S_Duplicate_ ALS	SX_OB_20220 518_08_05_S S_Primary_AL S	SX_IB_20220 518_11_51_S S_Primary_AL S	SX_IB_20220 518_15_51_S S_Triplicate_ ALS	SX_IB_20220 518_15_54_S S_Primary_AL S	
				Sampling date/time	Guideline						Guideline
				Lower Limit	Upper Limit						
						18-May-2022 07:56	18-May-2022 08:05	18-May-2022 11:51	18-May-2022 15:51	18-May-2022 15:54	
						EM2209314-013 MU	EM2209314-014 MU	EM2209314-015 MU	EM2209314-016 MU	EM2209314-017 MU	
EA001: pH in soil using 0.01M CaCl extract											
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----	
EG005(ED093T): Total Metals by ICP-AES											
Arsenic	EG005T	5	mg/kg	----	----	----	----	----	----	----	
Cadmium	EG005T	1	mg/kg	----	----	----	----	----	----	----	
Copper	EG005T	5	mg/kg	----	----	----	----	----	----	----	
Lead	EG005T	5	mg/kg	----	----	----	----	----	----	----	
Molybdenum	EG005T	5	mg/kg	----	----	----	----	----	----	----	
Nickel	EG005T	5	mg/kg	----	----	----	----	----	----	----	
Selenium	EG005T	5	mg/kg	----	----	----	----	----	----	----	
Silver	EG005T	2	mg/kg	----	----	----	----	----	----	----	
Zinc	EG005T	5	mg/kg	----	----	----	----	----	----	----	
EG035T: Total Recoverable Mercury by FIMS											
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----	
EG048: Hexavalent Chromium (Alkaline Digest)											
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----	
EK026SF: Total CN by Segmented Flow Analyser											
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----	
EK040T: Fluoride Total											
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----	
EP074A: Monocyclic Aromatic Hydrocarbons											
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----	
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----	
EP074I: Volatile Halogenated Compounds											
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----	
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	----	----	----	----	----	----	
Vinyl chloride	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----	
EP075A: Phenolic Compounds (Halogenated)											
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----	
EP075A: Phenolic Compounds (Non-halogenated)											
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	----	----	----	----	----	----	
EP075B: Polynuclear Aromatic Hydrocarbons											



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_IB_20220	SX_IB_20220	----	----
				Guideline	Guideline	518_16_01_S	518_23_55_S	519_04_11_S		
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS		
				Lower Limit	Upper Limit	18-May-2022 16:01	18-May-2022 23:55	19-May-2022 04:11		
						EM2209314-018 MU	EM2209314-019 MU	EM2209314-020 MU		
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----
EG005(ED093T): Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	----	----	----	----	----	----
Cadmium	EG005T	1	mg/kg	----	----	----	----	----	----	----
Copper	EG005T	5	mg/kg	----	----	----	----	----	----	----
Lead	EG005T	5	mg/kg	----	----	----	----	----	----	----
Molybdenum	EG005T	5	mg/kg	----	----	----	----	----	----	----
Nickel	EG005T	5	mg/kg	----	----	----	----	----	----	----
Selenium	EG005T	5	mg/kg	----	----	----	----	----	----	----
Silver	EG005T	2	mg/kg	----	----	----	----	----	----	----
Zinc	EG005T	5	mg/kg	----	----	----	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----
EP074I: Volatile Halogenated Compounds										
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	----	----	----	----	----	----
Vinyl chloride	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	----	----	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons										

QUALITY CONTROL REPORT

Work Order	: EM2209314	Page	: 1 of 30
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: DAVID LAWSON	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	: 19-May-2022
Order number	: ----	Date Analysis Commenced	: 20-May-2022
C-O-C number	: 20220519044335-ALS-21	Issue Date	: 26-May-2022
Sampler	: Dayle B - EP Risk		
Site	: 20220519044335-ALS-21		
Quote number	: EN/150/19 -WGTP -Bulk Sample Quote		
No. of samples received	: 20		
No. of samples analysed	: 20		



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

This Quality Control Report contains the following information:

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

Signatories

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

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



General Comments

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

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory 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: 4354034)									
EM2209155-012	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	2	3	60.1	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	5	7	44.1	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	3	52.4	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	4	75.9	No Limit
		EG005T: Silver	7440-22-4	2	mg/kg	<2	3	46.3	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	19	107	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.0	No Limit
EM2209188-009	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	4	3	28.5	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.0	No Limit
EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit		
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4354037)									
EM2209314-002	SX_IB_20220518_07_56_S S_Duplicate_ALS	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	99	108	8.9	0% - 20%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit



Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4354037) - continued									
EM2209314-002	SX_IB_20220518_07_56_S S_Duplicate_ALS	EG005T: Nickel	7440-02-0	2	mg/kg	174	166	4.6	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	20	24	16.1	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	56	55	0.0	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<10	<10	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	82	82	0.0	0% - 50%
EM2209339-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	30	23	28.8	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	26	27	5.1	0% - 50%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	7	8	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	7	6	20.9	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.0	No Limit
EG005T: Zinc	7440-66-6	5	mg/kg	13	15	12.0	No Limit		
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4357296)									
EM2209188-001	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	8.0	8.0	0.0	0% - 20%
EM2209302-010	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.3	7.3	0.0	0% - 20%
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4357297)									
EM2209314-010	SX_IB_20220518_23_55_S S_Primary_ALS	EA001: pH (CaCl2)	----	0.1	pH Unit	7.8	7.8	0.0	0% - 20%
EM2209403-025	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.7	7.9	1.8	0% - 20%
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4358081)									
EM2209276-001	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.6	7.8	1.9	0% - 20%
EM2209401-003	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	8.0	8.1	0.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4356344)									
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EA055: Moisture Content	----	0.1	%	25.8	25.8	0.0	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4354035)									
EM2209155-012	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2209188-009	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: 4354036)									
EM2209314-002	SX_IB_20220518_07_56_S S_Duplicate_ALS	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	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 (%)	
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4354036) - continued										
EM2209339-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 4356286)										
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	1.8	2.0	11.5	No Limit	
EM2209339-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4357304)										
EM2209302-005	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	86	98	13.4	0% - 20%	
EM2209306-005	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit	
EK040T: Fluoride Total (QC Lot: 4356285)										
EM2209302-028	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	270	260	0.0	No Limit	
EM2209314-010	SX_IB_20220518_23_55_S S_Primary_ALS	EK040T: Fluoride	16984-48-8	40	mg/kg	270	260	4.4	No Limit	
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4354058)										
EM2209087-015	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
EM2209314-007	SX_IB_20220518_15_51_S S_Triplicate_ALS	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4350851)										
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit	
		EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074-UT: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
			106-42-3							
		EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit			
EP074H: Naphthalene (QC Lot: 4350851)										
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit	
EP074I: Volatile Halogenated Compounds (QC Lot: 4350851)										
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.50	<0.50	0.0	No Limit	
		EP074-UT: cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.50	<0.50	0.0	No Limit	
		EP074-UT: 1,1,1-Trichloroethane	71-55-6	0.01	mg/kg	<0.50	<0.50	0.0	No Limit	
		EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.50	<0.50	0.0	No Limit	
		EP074-UT: 1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.50	<0.50	0.0	No Limit	
		EP074-UT: 1,2,4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.50	<0.50	0.0	No Limit	
		EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.50	<0.50	0.0	No Limit	
		EP074-UT: trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.50	<0.50	0.0	No Limit	
		EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.50	<0.50	0.0	No Limit	



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: 4350851) - continued									
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	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		
EP075A: Phenolic Compounds (Halogenated) (QC Lot: 4354056)									
EM2209087-015	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-9 0-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EM2209314-007	SX_IB_20220518_15_51_S S_Triplicate_ALS	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-9 0-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit
EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4354056)									
EM2209087-015	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



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: 4354056) - continued									
EM2209087-015	Anonymous	EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<5	<5	0.0	No Limit
EM2209314-007	SX_IB_20220518_15_51_S S_Triplicate_ALS	EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: Dinoseb	88-85-7	5	mg/kg	<20	<20	0.0	No Limit
EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<20	<20	0.0	No Limit		
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4354056)									
EM2209087-015	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	0.6	<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
EM2209314-007	SX_IB_20220518_15_51_S S_Triplicate_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		



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: 4354056) - continued									
EM2209314-007	SX_IB_20220518_15_51_S S_Triplicate_ALS	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: 4354056)									
EM2209087-015	Anonymous	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4,4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EM2209314-007	SX_IB_20220518_15_51_S S_Triplicate_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



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: 4354056) - continued									
EM2209314-007	SX_IB_20220518_15_51_S S_Triplicate_ALS	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		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4350851)									
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<20	<20	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4354057)									
EM2209087-015	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
EM2209314-007	SX_IB_20220518_15_51_S S_Triplicate_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: 4350851)									
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<20	<20	0.0	No Limit
		EP074-UT: C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4354057)									
EM2209087-015	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
EM2209314-007	SX_IB_20220518_15_51_S S_Triplicate_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



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 (%)		
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4353272)											
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
EM2209403-004	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	0.0004	0.0003	31.0	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	0.0050	0.0046	9.2	0% - 20%		
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4353272)											
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit		
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<5 µg/kg	<0.005	0.0	No Limit		
		EM2209403-004	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		
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4353272)											
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS			EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	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 (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4353272) - continued									
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	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
EM2209403-004	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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4353272)									
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EM2209403-004	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



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: 4353272) - continued									
EM2209403-004	Anonymous	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4353272)									
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: Sum of PFAS	----	0.0002	mg/kg	<50.0 µg/kg	<0.0500	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
EM2209403-004	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0054	0.0049	9.7	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0054	0.0049	9.7	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0054	0.0049	9.7	0% - 20%
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: 4355868)									
EM2209059-003	Anonymous	EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.14	0.14	0.0	0% - 50%
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.26	0.25	0.0	0% - 20%
		EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.06	0.05	25.4	No Limit
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4359472)									
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4359475)									
EM2209314-012	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit



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: 4359475) - continued									
EM2209314-012	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4355868)									
EM2209059-003	Anonymous	EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.22	0.25	11.3	0% - 20%
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.08	0.06	27.8	No Limit
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.05	0.04	0.0	No Limit
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	<0.10	0.0	No Limit		
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4359472)									
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4359475)									
EM2209314-012	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit



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: 4359475) - continued									
EM2209314-012	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4355868)									
EM2209059-003	Anonymous	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4359472)									
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4359475)									
EM2209314-012	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit



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: 4359475) - continued									
EM2209314-012	SX_IB_20220518_07_55_S S_Primary_ALS	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: 4355868)									
EM2209059-003	Anonymous	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4359472)									
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4359475)									
EM2209314-012	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4355868)									
EM2209059-003	Anonymous	EP231X-INJ: Sum of PFAS	----	0.01	µg/L	0.81	0.79	2.5	0% - 20%
		EP231X-INJ: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.40	0.39	2.5	0% - 20%
		EP231X-INJ: Sum of PFAS (WA DER List)	----	0.01	µg/L	0.81	0.79	2.5	0% - 20%

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 Work Order : EM2209314
 Client : AGON ENVIRONMENTAL PTY LTD
 Project : JC0927



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231P: PFAS Sums (QC Lot: 4359472)									
EM2209314-001	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4359475)									
EM2209314-012	SX_IB_20220518_07_55_S S_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit



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

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

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4354034)									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	89.8	70.0	130	
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	57.0	50.0	130	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	87.8	70.0	130	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	91.2	70.0	130	
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	87.4	70.0	130	
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	80.3	70.0	130	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	89.1	70.0	130	
EG005T: Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----	
EG005T: Silver	7440-22-4	2	mg/kg	<2	2.9 mg/kg	73.3	70.0	130	
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	72.4	70.0	130	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	72.0	70.0	130	
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4354037)									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	95.8	70.0	130	
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	60.4	50.0	130	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	94.6	70.0	130	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	95.5	70.0	130	
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	92.8	70.0	130	
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	75.8	70.0	130	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	94.3	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	72.9	70.0	130	
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	72.5	70.0	130	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	75.6	70.0	130	
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4356709)									
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.1	----	----	----	----	
EA001: pH in soil using 0.01M CaCl extract (QCLot: 4357296)									
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	100	98.8	101	
				----	7 pH Unit	100	99.3	101	
EA001: pH in soil using 0.01M CaCl extract (QCLot: 4357297)									
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	101	98.8	101	
				----	7 pH Unit	100	99.3	101	
EA001: pH in soil using 0.01M CaCl extract (QCLot: 4358081)									
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	100	98.8	101	
				----	7 pH Unit	100	99.3	101	



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	
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4354035)									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	85.9	70.0	130	
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4354036)									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	85.2	70.0	130	
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4356286)									
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	86.5	70.0	130	
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4357304)									
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	95.7	70.0	130	
EK040T: Fluoride Total (QCLot: 4356285)									
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	97.1	75.2	110	
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4354058)									
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	82.4	67.4	136	
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4350851)									
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	98.8	69.2	116	
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	91.8	67.7	116	
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	89.0	66.6	115	
EP074-UT: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	4.2 mg/kg	87.2	65.2	112	
	106-42-3								
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	89.5	69.4	111	
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	88.4	68.4	110	
EP074H: Naphthalene (QCLot: 4350851)									
EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	0.6 mg/kg	83.6	72.3	114	
EP074I: Volatile Halogenated Compounds (QCLot: 4350851)									
EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	125	47.0	138	
EP074-UT: 1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	118	57.6	125	
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	105	72.3	115	
EP074-UT: trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	109	60.5	122	
EP074-UT: cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	95.8	70.3	112	
EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	93.5	66.6	115	
EP074-UT: 1,1,1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	96.6	64.4	122	
EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	97.2	58.4	127	
EP074-UT: 1,2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	102	72.9	114	
EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	92.0	64.7	115	
EP074-UT: 1,1,1,2-Tetrachloroethane	79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	90.2	72.6	116	
EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	91.2	60.0	119	
EP074-UT: 1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	90.7	71.8	116	
EP074-UT: 1,1,1,2,2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	86.7	66.1	116	
EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	86.1	39.8	128	
EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	88.9	70.3	113	



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: 4350851) - continued									
EP074-UT: 1,4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	84.0	62.6	113	
EP074-UT: 1,2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	87.3	70.8	110	
EP074-UT: 1,2,4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	81.0	48.4	120	
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4354056)									
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	88.2	74.5	126	
EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	86.9	72.7	126	
EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	86.8	73.5	132	
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	88.8	72.8	128	
EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	2 mg/kg	87.5	73.3	134	
EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	2 mg/kg	87.9	72.4	128	
EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	81.5	69.4	126	
EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/5 8-90-2	0.05	mg/kg	<0.05	4 mg/kg	89.6	71.9	128	
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	79.4	54.4	135	
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4354056)									
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	89.6	71.5	130	
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	87.4	73.4	129	
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	90.1	74.3	129	
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	85.8	70.9	133	
EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	88.8	71.8	132	
EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	53.6	41.0	156	
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	85.3	65.3	134	
EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	76.4	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	79.2	62.0	128	
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	69.1	34.5	137	
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4354056)									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	89.9	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	89.4	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	90.0	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	91.4	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	88.2	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	87.4	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	87.7	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	88.4	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	91.2	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	92.4	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	92.4	75.8	133	



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: 4354056) - continued								
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	92.2	65.1	130
EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	95.8	72.1	134
EP075-EM: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	96.1	72.9	135
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	94.6	71.3	134
EP075I: Organochlorine Pesticides (QCLot: 4354056)								
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	86.6	71.0	129
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	87.4	74.8	126
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	87.4	75.7	130
EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	2 mg/kg	87.3	70.8	130
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	88.0	76.5	134
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	85.1	75.5	131
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	85.8	76.8	130
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	87.3	73.6	130
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	89.2	75.0	133
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	89.2	75.3	131
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	88.9	69.4	134
EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	90.6	71.0	132
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	90.5	78.0	133
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	97.2	69.0	143
EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	2 mg/kg	90.0	55.7	145
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	93.1	71.4	135
EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	90.9	74.8	134
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	91.9	70.2	135
EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	90.2	77.7	133
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	93.0	63.6	135
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4350851)								
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	92.0	61.1	119
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4354057)								
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	670 mg/kg	90.8	74.4	129
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	2860 mg/kg	105	81.0	123
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1490 mg/kg	98.4	81.8	121
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5020 mg/kg	101	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4350851)								
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	92.1	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: 4354057)								
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1000 mg/kg	98.8	75.4	132



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	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4354057) - continued									
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	3770 mg/kg	106	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	250 mg/kg	93.7	73.3	136	
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5020 mg/kg	104	70.0	130	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4353272)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	89.5	72.0	128	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	109	73.0	123	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	82.6	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	116	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	98.2	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	104	59.0	134	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4353272)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	89.0	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	76.8	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.4	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.9	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.7	69.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.0	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	115	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	77.8	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.8	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.2	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	93.5	69.0	133	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4353272)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.6	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	80.6	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	118	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	98.2	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	86.9	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.2	61.0	139	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4353272)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	99.8	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	105	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	104	65.0	137	



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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4353272) - continued									
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00121 mg/kg	94.2	70.0	130	
EP231P: PFAS Sums (QCLot: 4353272)									
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: 4355868)									
EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.444 µg/L	84.4	72.0	130	
EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.47 µg/L	79.3	71.0	127	
EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.457 µg/L	72.8	68.0	131	
EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.477 µg/L	78.9	69.0	134	
EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.465 µg/L	82.4	65.0	140	
EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.482 µg/L	62.7	53.0	142	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4359472)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	108	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	118	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	106	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	103	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	102	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	110	53.0	142	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4359475)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	105	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	105	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	90.6	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	109	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	109	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	119	53.0	142	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4355868)									
EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	2.5 µg/L	81.1	73.0	129	
EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.5 µg/L	80.0	72.0	129	
EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.5 µg/L	73.0	72.0	129	
EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.5 µg/L	76.0	72.0	130	
EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.5 µg/L	73.6	71.0	133	
EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.5 µg/L	85.9	69.0	130	
EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.5 µg/L	81.1	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: 4355868) - continued									
EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.5 µg/L	71.1	69.0	133	
EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.5 µg/L	79.3	72.0	134	
EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.5 µg/L	74.7	65.0	144	
EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	1.25 µg/L	88.5	71.0	132	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4359472)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	102	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	100.0	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	105	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.9	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	104	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	108	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	87.9	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	96.8	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	104	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	106	71.0	132	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4359475)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	97.9	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	101	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	98.0	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	105	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	101	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	104	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	96.4	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	99.8	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	92.1	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	100	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	103	71.0	132	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4355868)									
EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.5 µg/L	78.0	67.0	137	
EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	1.25 µg/L	91.8	68.0	141	
EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	1.25 µg/L	81.7	70.0	130	
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	1.25 µg/L	73.7	70.0	130	
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	1.25 µg/L	92.6	70.0	130	
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.5 µg/L	86.1	65.0	136	



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4355868) - continued									
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.5 µg/L	84.6	61.0	135	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4359472)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	113	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	109	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	106	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	109	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	113	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	108	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	118	61.0	135	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4359475)									
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	130	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	92.7	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	118	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	103	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	99.9	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	105	61.0	135	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4355868)									
EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.469 µg/L	84.3	63.0	143	
EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.476 µg/L	106	64.0	140	
EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.48 µg/L	79.2	67.0	138	
EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.483 µg/L	72.3	70.0	130	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4359472)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	108	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	102	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	128	67.0	138	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	116	70.0	130	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4359475)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	101	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	109	64.0	140	



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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4359475) - continued									
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	122	67.0	138	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	121	70.0	130	
EP231P: PFAS Sums (QCLot: 4355868)									
EP231X-INJ: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----	
EP231X-INJ: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----	
EP231X-INJ: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----	
EP231P: PFAS Sums (QCLot: 4359472)									
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: 4359475)									
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----	
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----	
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----	

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery(%) MS	Acceptable Limits (%)	
						Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4354034)							
EM2209155-017	Anonymous	EG005T: Nickel	7440-02-0	50 mg/kg	86.5	78.0	120
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4354037)							
EM2209314-003	SX_OB_20220518_08_05_SS_Primary_ALS	EG005T: Arsenic	7440-38-2	50 mg/kg	80.6	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	92.2	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	106	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	99.3	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	91.7	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	91.0	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	88.9	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4354035)							
EM2209155-017	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	105	76.0	116



Sub-Matrix: SOIL

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4354036)							
EM2209314-003	SX_OB_20220518_08_05_SS_Primary_ALS	EG035T: Mercury	7439-97-6	0.5 mg/kg	96.1	76.0	116
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4356286)							
EM2209314-002	SX_IB_20220518_07_56_SS_Duplicate_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	92.9	58.0	114
EM2209314-002	SX_IB_20220518_07_56_SS_Duplicate_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	101	58.0	114
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4357304)							
EM2209302-008	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	102	70.0	130
EK040T: Fluoride Total (QCLot: 4356285)							
EM2209302-030	Anonymous	EK040T: Fluoride	16984-48-8	400 mg/kg	70.0	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4354058)							
EM2209276-001	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	88.3	59.6	152
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4350851)							
EM2209314-002	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	108	53.7	130
		EP074-UT: Toluene	108-88-3	2 mg/kg	109	55.1	124
EP074I: Volatile Halogenated Compounds (QCLot: 4350851)							
EM2209314-002	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	104	38.4	145
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	96.9	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	96.3	55.5	122
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4354056)							
EM2209188-015	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	75.3	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	75.2	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	59.1	10.0	144
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4354056)							
EM2209188-015	Anonymous	EP075-EM: Phenol	108-95-2	3 mg/kg	76.0	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	71.5	34.2	129
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4354056)							
EM2209188-015	Anonymous	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	73.5	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	72.6	37.8	152
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4350851)							
EM2209314-002	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	96.6	42.3	111
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4354057)							
EM2209264-001	Anonymous	EP071-EM: C10 - C14 Fraction	----	670 mg/kg	99.1	71.3	126
		EP071-EM: C15 - C28 Fraction	----	2860 mg/kg	97.4	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1490 mg/kg	85.1	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	5020 mg/kg	93.6	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4350851)							



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: 4350851) - continued							
EM2209314-002	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	93.6	39.9	109
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4354057)							
EM2209264-001	Anonymous	EP071-EM: >C10 - C16 Fraction	----	1000 mg/kg	104	71.5	130
		EP071-EM: >C16 - C34 Fraction	----	3770 mg/kg	95.7	76.9	119
		EP071-EM: >C34 - C40 Fraction	----	250 mg/kg	70.7	65.3	139
		EP071-EM: >C10 - C40 Fraction (sum)	----	5020 mg/kg	95.8	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4353272)							
EM2209314-002	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	106	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	112	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	107	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	122	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	76.5	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	102	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4353272)							
EM2209314-002	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	90.2	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	77.4	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	96.0	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	97.2	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	92.4	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	102	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	102	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	104	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	102	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	79.6	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	97.6	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4353272)							
EM2209314-002	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	102	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	92.7	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	104	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	105	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	91.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	104	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	109	61.0	139



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4353272)							
EM2209314-002	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	106	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	95.3	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	112	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	82.1	70.0	130
Sub-Matrix: WATER							
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4355868)							
EM2209110-005	Anonymous	EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.444 µg/L	95.3	72.0	130
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.47 µg/L	81.6	71.0	127
		EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.457 µg/L	83.4	68.0	131
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.477 µg/L	79.0	69.0	134
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.465 µg/L	87.1	65.0	140
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.482 µg/L	66.0	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4359472)							
EM2209314-002	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	100	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	92.8	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	87.0	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	106	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	106	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4359475)							
EM2209314-013	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	102	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	91.0	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	87.7	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	92.6	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	84.9	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	88.9	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4355868)							
EM2209110-005	Anonymous	EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	2.5 µg/L	93.7	73.0	129
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.5 µg/L	93.6	72.0	129
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.5 µg/L	79.6	72.0	129
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.5 µg/L	86.4	72.0	130
		EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.5 µg/L	82.4	71.0	133
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.5 µg/L	99.9	69.0	130
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.5 µg/L	78.9	71.0	129
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.5 µg/L	95.7	69.0	133
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.5 µg/L	94.4	72.0	134



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4355868) - continued							
EM2209110-005	Anonymous	EP231X-INJ: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.5 µg/L	77.4	65.0	144
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	1.25 µg/L	101	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4359472)							
EM2209314-002	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	100	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	102	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	109	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	105	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	98.9	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	122	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	97.7	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	94.0	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	95.3	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	98.9	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	108	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4359475)							
EM2209314-013	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	91.0	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	95.0	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	102	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	97.1	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	113	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	98.8	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	90.2	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	72.4	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	74.1	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	83.9	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4355868)							
EM2209110-005	Anonymous	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.5 µg/L	96.0	67.0	137
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	1.25 µg/L	95.3	68.0	141
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	1.25 µg/L	104	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	1.25 µg/L	76.0	70.0	130
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	1.25 µg/L	111	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.5 µg/L	103	65.0	136



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	Spike Recovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4355868) - continued							
EM2209110-005	Anonymous	EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.5 µg/L	105	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4359472)							
EM2209314-002	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	109	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	127	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	95.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	101	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	102	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	112	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	107	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4359475)							
EM2209314-013	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	113	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	96.7	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	78.0	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	93.4	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	83.4	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	79.0	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	93.0	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4355868)							
EM2209110-005	Anonymous	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.469 µg/L	84.5	63.0	143
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.476 µg/L	93.5	64.0	140
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.48 µg/L	85.4	67.0	138
		EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.483 µg/L	90.8	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4359472)							
EM2209314-002	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	110	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	115	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	125	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	103	70.0	130

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 Work Order : EM2209314
 Client : AGON ENVIRONMENTAL PTY LTD
 Project : JC0927



Sub-Matrix: **WATER**

				<i>Matrix Spike (MS) Report</i>			
				<i>Spike</i>	<i>SpikeRecovery(%)</i>	<i>Acceptable Limits (%)</i>	
<i>Laboratory sample ID</i>	<i>Sample ID</i>	<i>Method: Compound</i>	<i>CAS Number</i>	<i>Concentration</i>	<i>MS</i>	<i>Low</i>	<i>High</i>
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4359475)							
EM2209314-013	SX_IB_20220518_07_56_SS_Duplicate_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	106	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	108	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	111	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	81.6	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EM2209314	Page	: 1 of 14
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: DAVID LAWSON	Telephone	: +61-3-8549 9600
Project	: JC0927	Date Samples Received	: 19-May-2022
Site	: 20220519044335-ALS-21	Issue Date	: 26-May-2022
Sampler	: Dayle B - EP Risk	No. of samples received	: 20
Order number	: ----	No. of samples analysed	: 20

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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



Regular Sample Surrogates

Sub-Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP075T: Base/Neutral Extractable Surrogates (Waste C	EM2209314-008	SX_IB_20220518_15_54_SS_	Anthracene-d10	1719-06-8	68.0 %	69.6-133 %	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_IB_20220518_07_55_SS_Primary_ALS, SX_IB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_IB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	25-May-2022	25-May-2022	✓	25-May-2022	25-May-2022	✓
Soil Glass Jar - Unpreserved (EA001)								
SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	25-May-2022	26-May-2022	✓	25-May-2022	25-May-2022	✓
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055)								
SX_IB_20220518_07_55_SS_Primary_ALS, SX_IB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_IB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	----	----	----	24-May-2022	01-Jun-2022	✓
Soil Glass Jar - Unpreserved (EA055)								
SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	----	----	----	24-May-2022	02-Jun-2022	✓
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
SX_IB_20220518_07_55_SS_Primary_ALS, SX_IB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_IB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	15-Nov-2022	✓	24-May-2022	15-Nov-2022	✓
Soil Glass Jar - Unpreserved (EG005T)								
SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	15-Nov-2022	✓	24-May-2022	15-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_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	15-Jun-2022	✓	25-May-2022	15-Jun-2022	✓
Soil Glass Jar - Unpreserved (EG035T) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	16-Jun-2022	✓	25-May-2022	16-Jun-2022	✓
EG048: Hexavalent Chromium (Alkaline Digest)								
Soil Glass Jar - Unpreserved (EG048G) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	15-Jun-2022	✓	25-May-2022	31-May-2022	✓
Soil Glass Jar - Unpreserved (EG048G) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	16-Jun-2022	✓	25-May-2022	31-May-2022	✓
EK026SF: Total CN by Segmented Flow Analyser								
Soil Glass Jar - Unpreserved (EK026SF) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	01-Jun-2022	✓	25-May-2022	07-Jun-2022	✓
Soil Glass Jar - Unpreserved (EK026SF) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	02-Jun-2022	✓	25-May-2022	07-Jun-2022	✓
EK040T: Fluoride Total								
Soil Glass Jar - Unpreserved (EK040T) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	15-Jun-2022	✓	26-May-2022	15-Jun-2022	✓
Soil Glass Jar - Unpreserved (EK040T) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	16-Jun-2022	✓	26-May-2022	16-Jun-2022	✓
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P)								
SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	15-Nov-2022	✓	----	----	----
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	15-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
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_IB_20220518_07_55_SS_Primary_ALS, SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	15-Nov-2022	✓	----	----	----
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P)							
SX_IB_20220519_04_11_SS_Primary_ALS	19-May-2022	24-May-2022	15-Nov-2022	✓	----	----	----
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066-EM)							
SX_IB_20220518_07_55_SS_Primary_ALS, SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	01-Jun-2022	✓	24-May-2022	03-Jul-2022	✓
Soil Glass Jar - Unpreserved (EP066-EM)							
SX_IB_20220519_04_11_SS_Primary_ALS	19-May-2022	24-May-2022	02-Jun-2022	✓	24-May-2022	03-Jul-2022	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074-UT)							
SX_IB_20220518_07_55_SS_Primary_ALS, SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	20-May-2022	25-May-2022	✓	20-May-2022	25-May-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT)							
SX_IB_20220519_04_11_SS_Primary_ALS	19-May-2022	20-May-2022	26-May-2022	✓	20-May-2022	26-May-2022	✓
EP074H: Naphthalene							
Soil Glass Jar - Unpreserved (EP074-UT)							
SX_IB_20220518_07_55_SS_Primary_ALS, SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	20-May-2022	25-May-2022	✓	20-May-2022	25-May-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT)							
SX_IB_20220519_04_11_SS_Primary_ALS	19-May-2022	20-May-2022	26-May-2022	✓	20-May-2022	26-May-2022	✓
EP074I: Volatile Halogenated Compounds							
Soil Glass Jar - Unpreserved (EP074-UT)							
SX_IB_20220518_07_55_SS_Primary_ALS, SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	20-May-2022	25-May-2022	✓	20-May-2022	25-May-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT)							
SX_IB_20220519_04_11_SS_Primary_ALS	19-May-2022	20-May-2022	26-May-2022	✓	20-May-2022	26-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	
EP075A: Phenolic Compounds (Halogenated)								
Soil Glass Jar - Unpreserved (EP075-EM) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	01-Jun-2022	✓	24-May-2022	03-Jul-2022	✓
Soil Glass Jar - Unpreserved (EP075-EM) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	02-Jun-2022	✓	24-May-2022	03-Jul-2022	✓
EP075A: Phenolic Compounds (Non-halogenated)								
Soil Glass Jar - Unpreserved (EP075-EM) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	01-Jun-2022	✓	24-May-2022	03-Jul-2022	✓
Soil Glass Jar - Unpreserved (EP075-EM) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	02-Jun-2022	✓	24-May-2022	03-Jul-2022	✓
EP075B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075-EM) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	01-Jun-2022	✓	24-May-2022	03-Jul-2022	✓
Soil Glass Jar - Unpreserved (EP075-EM) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	02-Jun-2022	✓	24-May-2022	03-Jul-2022	✓
EP075I: Organochlorine Pesticides								
Soil Glass Jar - Unpreserved (EP075-EM) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	01-Jun-2022	✓	24-May-2022	03-Jul-2022	✓
Soil Glass Jar - Unpreserved (EP075-EM) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	02-Jun-2022	✓	24-May-2022	03-Jul-2022	✓



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	20-May-2022	25-May-2022	✓	20-May-2022	25-May-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	01-Jun-2022	✓	24-May-2022	03-Jul-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	20-May-2022	26-May-2022	✓	20-May-2022	26-May-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	02-Jun-2022	✓	24-May-2022	03-Jul-2022	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	20-May-2022	25-May-2022	✓	20-May-2022	25-May-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	01-Jun-2022	✓	24-May-2022	03-Jul-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	20-May-2022	26-May-2022	✓	20-May-2022	26-May-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	02-Jun-2022	✓	24-May-2022	03-Jul-2022	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	15-Nov-2022	✓	24-May-2022	03-Jul-2022	✓
HDPE Soil Jar (EP231X) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	15-Nov-2022	✓	24-May-2022	03-Jul-2022	✓



Matrix: **SOIL**

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	15-Nov-2022	✓	24-May-2022	03-Jul-2022	✓
HDPE Soil Jar (EP231X) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	15-Nov-2022	✓	24-May-2022	03-Jul-2022	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE Soil Jar (EP231X) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	15-Nov-2022	✓	24-May-2022	03-Jul-2022	✓
HDPE Soil Jar (EP231X) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	15-Nov-2022	✓	24-May-2022	03-Jul-2022	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	15-Nov-2022	✓	24-May-2022	03-Jul-2022	✓
HDPE Soil Jar (EP231X) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	15-Nov-2022	✓	24-May-2022	03-Jul-2022	✓
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X) SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS	18-May-2022	24-May-2022	15-Nov-2022	✓	24-May-2022	03-Jul-2022	✓
HDPE Soil Jar (EP231X) SX_IB_20220519_04_11_SS_Primary_ALS		19-May-2022	24-May-2022	15-Nov-2022	✓	24-May-2022	03-Jul-2022	✓

Matrix: **WATER**

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

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



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-INJ)									
SX_OB_20220518_08_22_SR_Rinsate_ALS,	SX_OB_20220518_08_23_SB_Blank_ALS	18-May-2022	24-May-2022	14-Nov-2022	✓	24-May-2022	14-Nov-2022	✓	
HDPE (no PTFE) (EP231X)									
SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220519_04_11_SS_Primary_ALS, SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS, SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220519_04_11_SS_Primary_ALS	24-May-2022	25-May-2022	20-Nov-2022	✓	25-May-2022	20-Nov-2022	✓	
EP231B: Perfluoroalkyl Carboxylic Acids									
HDPE (no PTFE) (EP231X-INJ)									
SX_OB_20220518_08_22_SR_Rinsate_ALS,	SX_OB_20220518_08_23_SB_Blank_ALS	18-May-2022	24-May-2022	14-Nov-2022	✓	24-May-2022	14-Nov-2022	✓	
HDPE (no PTFE) (EP231X)									
SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220519_04_11_SS_Primary_ALS, SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS, SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220519_04_11_SS_Primary_ALS	24-May-2022	25-May-2022	20-Nov-2022	✓	25-May-2022	20-Nov-2022	✓	
EP231C: Perfluoroalkyl Sulfonamides									
HDPE (no PTFE) (EP231X-INJ)									
SX_OB_20220518_08_22_SR_Rinsate_ALS,	SX_OB_20220518_08_23_SB_Blank_ALS	18-May-2022	24-May-2022	14-Nov-2022	✓	24-May-2022	14-Nov-2022	✓	
HDPE (no PTFE) (EP231X)									
SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220519_04_11_SS_Primary_ALS, SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS, SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220519_04_11_SS_Primary_ALS	24-May-2022	25-May-2022	20-Nov-2022	✓	25-May-2022	20-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	
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X-INJ)								
SX_OB_20220518_08_22_SR_Rinsate_ALS,	SX_OB_20220518_08_23_SB_Blank_ALS	18-May-2022	24-May-2022	14-Nov-2022	✓	24-May-2022	14-Nov-2022	✓
HDPE (no PTFE) (EP231X)								
SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220519_04_11_SS_Primary_ALS, SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS, SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220519_04_11_SS_Primary_ALS	24-May-2022	25-May-2022	20-Nov-2022	✓	25-May-2022	20-Nov-2022	✓
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X-INJ)								
SX_OB_20220518_08_22_SR_Rinsate_ALS,	SX_OB_20220518_08_23_SB_Blank_ALS	18-May-2022	24-May-2022	14-Nov-2022	✓	24-May-2022	14-Nov-2022	✓
HDPE (no PTFE) (EP231X)								
SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220519_04_11_SS_Primary_ALS, SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS,	SX_IB_20220518_07_56_SS_Duplicate_ALS, SX_IB_20220518_11_51_SS_Primary_ALS, SX_IB_20220518_15_54_SS_Primary_ALS, SX_IB_20220518_23_55_SS_Primary_ALS, SX_IB_20220518_07_55_SS_Primary_ALS, SX_OB_20220518_08_05_SS_Primary_ALS, SX_IB_20220518_15_51_SS_Triplicate_ALS, SX_OB_20220518_16_01_SS_Primary_ALS, SX_IB_20220519_04_11_SS_Primary_ALS	24-May-2022	25-May-2022	20-Nov-2022	✓	25-May-2022	20-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	
Analytical Methods							
Laboratory Duplicates (DUP)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	1	10	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	6	53	11.32	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	36	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	36	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	9	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	6	53	11.32	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Deionised Water Leach - Plastic Leaching Vessel	EN60-DIa-P	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard



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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Reular	Actual	Expected	Evaluation	
Analytical Methods							
Matrix Spikes (MS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard

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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Reular	Actual	Expected	Evaluation	
Analytical Methods							
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	5	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	18	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	18	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	18	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
pH in soil using a 0.01M CaCl 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-INJ	WATER	In house: Direct injection analysis of fresh waters after dilution (1:1) with mobile phase solvent. Analysis by LC-Electrospray-MS-MS, Negative Mode using MRM. Where commercially available, isotopically labelled analogues of the target analytes are used as internal standards for quantification. Where a labelled analogue is not commercially available, the internal standard with similar chemistry and the closest retention time to the target is used for quantification. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers.

Preparation Methods	Method	Matrix	Method Descriptions
NaOH leach for CN in Soils	CN-PR	SOIL	In house: APHA 4500 CN. Samples are extracted by end-over-end tumbling with NaOH.
pH in soil using a 0.01M CaCl 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.
Preparation for PFAS in water.	EP231-PR	WATER	Method presumes direct injection without workup. Preparation includes addition of internal standard and surrogate, and filtration prior to analysis.

CHAIN OF CUSTODY DOCUMENTATION										 Australian Laboratory Services Pty Ltd									
CLIENT: Agon Environmental					SAMPLER: HK - EP Risk Martha - Agon														
ADDRESS / OFFICE: Melbourne					MOBILE 1: +61 400 826 907 (Craig Trimbur)														
PROJECT MANAGER (PM): Craig Trimbur					MOBILE 2: +61 490 411 004 (David Lawson)														
PROJECT ID: JC0927					EMAIL REPORT TO: Labreports.TST@agonenviro.com.au agonenvironmental@esdat.com.au motherhublabresults1@wqto.com.au														
SITE: 20220520043942-ALS-52 P.O. NO.:					EMAIL INVOICE TO: (if different to report) Labreports.TST@agonenviro.com.au agonenvironmental@esdat.com.au														
RESULTS REQUIRED (Date): 5 days QUOTE NO.: ME-150-19 WGTP					ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)														
FOR LAB/FACILITY USE ONLY COOLER SEAL (circle appropriate) No Yes SAMPLE TEMPERATURE CHILLED: Yes No			COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:						Notes:										
SAMPLE INFORMATION (note: S = Soil, W = Water)						CONTAINER INFORMATION													
ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles	Spoil Sample Prep	P-16 plus Cr	PFAS 28 Extended suite	ASLP PFAS - Extended Suite (Lab to determine pH)	DI Leachate PFAS - Extended Suite								
14 15 16 17 18 19 20 21 22 23 24	1	SX_IB_20220519_07_51_SS_Primary_ALS	S	19.05.22	7:51	Bucket	1	X	X	X	X	X							
	2	SX_OB_20220519_07_59_SS_Primary_ALS	S	19.05.22	7:59	Bucket	1	X	X	X	X	X							
	3	SX_OB_20220519_08_00_SS_Duplicate_ALS	S	19.05.22	8:00	Bucket	1	X	X	X	X	X							
	4	SX_IB_20220519_08_43_SR_Rinseate_ALS	W	19.05.22	8:43	Bottle	1			X									
	5	SX_IB_20220519_08_44_SB_Blank_ALS	W	19.05.22	8:44	Bottle	1			X									
	6	SX_IB_20220519_11_57_SS_Primary_ALS	S	19.05.22	11:57	Bucket	1	X	X	X	X	X							
	7	SX_OB_20220519_15_49_SS_Primary_ALS	S	19.05.22	15:49	Bucket	1	X	X	X	X	X							
	8	SX_IB_20220519_15_58_SS_Triplicate_ALS	S	19.05.22	15:58	Bucket	1	X	X	X	X	X							
	9	SX_IB_20220519_16_07_SS_Primary_ALS	S	19.05.22	16:07	Bucket	1	X	X	X	X	X							
	10	SX_IB_20220519_20_06_SS_Triplicate_ALS	S	19.05.22	20:06	Bucket	1	X	X	X	X	X							
	11	SX_IB_20220519_20_10_SS_Primary_ALS	S	19.05.22	20:10	Bucket	1	X	X	X	X	X							
	12	SX_IB_20220520_00_01_SS_Primary_ALS	S	20.05.22	00:01	Bucket	1	X	X	X	X	X							
	13	SX_OB_20220520_04_06_SS_Primary_ALS	S	20.05.22	4:06	Bucket	1	X	X	X	X	X							
RELINQUISHED BY:					RECEIVED BY:					METHOD OF SHIPMENT:									
Name: Martha / Emma			Date: 20/5/22		Name: Emma			Date: 20/5		Con' Note No:									
Of: Agon EP Risk			Time: 8:48am		Of: Au			Time: 9:30		Transport Co:									
Name:			Date:		Name:			Date:											
Of:			Time:		Of:			Time:											
Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Gd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; V = VOA Vial HCl Preserved; VS = VOA Vial Sulphuric Preserved; SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag																			

Environmental Division
Melbourne
Work Order Reference
EM2209335



Telephone: +61 3 8549 9600

CERTIFICATE OF ANALYSIS

Work Order : **EM2209335**
Client : **AGON ENVIRONMENTAL PTY LTD**
Contact : DAVID LAWSON
Address : D1.1 63-85 TURNER STREET
 PORT MELBOURNE 3207

Telephone : ----
Project : JC0927
Order number : ----
C-O-C number : 20220520043942-ALS-52
Sampler : HK - EP Risk, Martha - Agon
Site : 20220520043942-ALS-52
Quote number : EN/150/19 -WGTP -Bulk Sample Quote
No. of samples received : 24
No. of samples analysed : 24

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 : 20-May-2022 09:50
Date Analysis Commenced : 21-May-2022
Issue Date : 27-May-2022 17:14



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
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC



General Comments

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

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP074-UT: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074-WF: Where reported, Sum of trichlorobenzenes is the sum of the reported concentrations of 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene, and 1,3,5-Trichlorobenzene at or above the LOR.
- EP231X: Poor matrix spike recovery for sample EM2209335-015 due to sample matrix interference.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.
- EN60: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.
- EN60-DI: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.
- EP231X-INJ: The direct injection LCMSMS method may be used where the sample matrix is not suitable for Solid Phase Extraction (e.g. significant particulate load) or where only a single sample container is received.



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS	SX_OB_20220519_15_49_SS_Primary_ALS
Sampling date / time				19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
Compound	CAS Number	LOR	Unit	EM2209335-001	EM2209335-002	EM2209335-003	EM2209335-006	EM2209335-007
				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_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS	SX_OB_20220519_15_49_SS_Primary_ALS
Sampling date / time				19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
Compound	CAS Number	LOR	Unit	EM2209335-001	EM2209335-002	EM2209335-003	EM2209335-006	EM2209335-007
				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	%	106	98.1	100	91.8	96.7
13C8-PFOA	----	0.02	%	103	95.1	87.9	89.9	92.4



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

		Sampling date / time			SX_IB_20220519_15_58_SS_Triplicate_ALS	SX_IB_20220519_16_07_SS_Primary_ALS	SX_IB_20220519_20_06_SS_Triplicate_ALS	SX_IB_20220519_20_10_SS_Primary_ALS	SX_IB_20220520_00_01_SS_Primary_ALS
Compound	CAS Number	LOR	Unit	EM2209335-008	EM2209335-009	EM2209335-010	EM2209335-011	EM2209335-012	
				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	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_IB_20220519_15_58_SS_Triplicate_ALS	SX_IB_20220519_16_07_SS_Primary_ALS	SX_IB_20220519_20_06_SS_Triplicate_ALS	SX_IB_20220519_20_10_SS_Primary_ALS	SX_IB_20220520_00_01_SS_Primary_ALS
Sampling date / time				19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01
Compound	CAS Number	LOR	Unit	EM2209335-008	EM2209335-009	EM2209335-010	EM2209335-011	EM2209335-012
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
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	%	91.0	105	101	102	109
13C8-PFOA	----	0.02	%	96.2	96.6	91.4	95.7	103



Analytical Results

Sub-Matrix: ASLP LEACHATE (Matrix: WATER)		Sample ID		SX_OB_20220520_04 _06_SS_Primary_ALS	----	----	----	----
Sampling date / time		20-May-2022 04:06		----	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2209335-013	-----	-----	-----	-----
				Result	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220520_04 _06_SS_Primary_ALS	----	----	----	----
				20-May-2022 04:06	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2209335-013	-----	-----	-----	-----
				Result	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<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	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	----	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.10	µg/L	<0.10	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	----	----	----	----
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	----	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	105	----	----	----	----
13C8-PFOA	----	0.02	%	96.7	----	----	----	----



Analytical Results

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

Sample ID

				SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS	SX_OB_20220519_15_49_SS_Primary_ALS
Sampling date / time				19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
Compound	CAS Number	LOR	Unit	EM2209335-014	EM2209335-015	EM2209335-016	EM2209335-017	EM2209335-018
				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_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS	SX_OB_20220519_15_49_SS_Primary_ALS
Sampling date / time				19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
Compound	CAS Number	LOR	Unit	EM2209335-014	EM2209335-015	EM2209335-016	EM2209335-017	EM2209335-018
				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	%	99.6	98.3	104	92.5	106
13C8-PFOA	----	0.02	%	96.0	91.0	90.5	96.8	91.9



Analytical Results

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

Sample ID

				SX_IB_20220519_15_58_SS_Triplicate_ALS	SX_IB_20220519_16_07_SS_Primary_ALS	SX_IB_20220519_20_06_SS_Triplicate_ALS	SX_IB_20220519_20_10_SS_Primary_ALS	SX_IB_20220520_00_01_SS_Primary_ALS
Sampling date / time				19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01
Compound	CAS Number	LOR	Unit	EM2209335-019	EM2209335-020	EM2209335-021	EM2209335-022	EM2209335-023
				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
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

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

Sample ID

				SX_IB_20220519_15_58_SS_Triplicate_ALS	SX_IB_20220519_16_07_SS_Primary_ALS	SX_IB_20220519_20_06_SS_Triplicate_ALS	SX_IB_20220519_20_10_SS_Primary_ALS	SX_IB_20220520_00_01_SS_Primary_ALS
Sampling date / time				19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01
Compound	CAS Number	LOR	Unit	EM2209335-019	EM2209335-020	EM2209335-021	EM2209335-022	EM2209335-023
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
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	%	96.8	103	104	96.1	95.0
13C8-PFOA	----	0.02	%	93.4	95.9	91.1	93.6	93.9



Analytical Results

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

Sample ID

				SX_OB_20220520_04_06_SS_Primary_ALS	----	----	----	----
		Sampling date / time		20-May-2022 04:06	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2209335-024	-----	-----	-----	-----
				Result	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: DI WATER LEACHATE (Matrix: WATER)		Sample ID			SX_OB_20220520_04 _06_SS_Primary_ALS	----	----	----	----
Sampling date / time		20-May-2022 04:06			----	----	----	----	
Compound	CAS Number	LOR	Unit	EM2209335-024	-----	-----	-----	-----	
				Result	----	----	----	----	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	----	----	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	----	----	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	----	----	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<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	----	----	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	----	----	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	----	----	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	----	----	----	----	
EP231P: PFAS Sums									
Sum of PFAS	----	0.10	µg/L	<0.10	----	----	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	----	----	----	----	
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	----	----	----	----	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%	96.9	----	----	----	----	
13C8-PFOA	----	0.02	%	99.0	----	----	----	----	



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS	SX_OB_20220519_15_49_SS_Primary_ALS
Sampling date / time				19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
Compound	CAS Number	LOR	Unit	EM2209335-001	EM2209335-002	EM2209335-003	EM2209335-006	EM2209335-007
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	7.7	7.9	7.7	7.8	7.8
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	26.8	30.6	28.2	30.0	23.4
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	22	53	27	21	54
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	1
Chromium	7440-47-3	5	mg/kg	137	84	106	132	67
Copper	7440-50-8	5	mg/kg	86	57	61	62	56
Lead	7439-92-1	5	mg/kg	<5	6	<5	<5	<5
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	<5	<5
Nickel	7440-02-0	5	mg/kg	186	140	153	176	155
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	94	104	105	87
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	2.2	1.2	<1.0	3.0	<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	300	230	250	280	190
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Initial pH	----	0.1	pH Unit	8.3	7.9	8.1	7.9	7.4
After HCl pH	----	0.1	pH Unit	1.5	1.0	1.8	1.8	1.6
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	5.0	5.0
Final pH	----	0.1	pH Unit	5.1	5.1	5.1	5.1	5.2
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS	SX_OB_20220519_15_49_SS_Primary_ALS
Sampling date / time				19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
Compound	CAS Number	LOR	Unit	EM2209335-001	EM2209335-002	EM2209335-003	EM2209335-006	EM2209335-007
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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)								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS	SX_OB_20220519_15_49_SS_Primary_ALS
Sampling date / time				19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
Compound	CAS Number	LOR	Unit	EM2209335-001	EM2209335-002	EM2209335-003	EM2209335-006	EM2209335-007
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Halogenated) - Continued								
2-Chlorophenol	95-57-8	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
2,4-Dichlorophenol	120-83-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
2,6-Dichlorophenol	87-65-0	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,4,5-Trichlorophenol	95-95-4	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS	SX_OB_20220519_15_49_SS_Primary_ALS
Sampling date / time				19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
Compound	CAS Number	LOR	Unit	EM2209335-001	EM2209335-002	EM2209335-003	EM2209335-006	EM2209335-007
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS	SX_OB_20220519_15_49_SS_Primary_ALS
Sampling date / time				19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
Compound	CAS Number	LOR	Unit	EM2209335-001	EM2209335-002	EM2209335-003	EM2209335-006	EM2209335-007
				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	<0.30	<0.30	<0.30
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS	SX_OB_20220519_15_49_SS_Primary_ALS
Sampling date / time				19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
Compound	CAS Number	LOR	Unit	EM2209335-001	EM2209335-002	EM2209335-003	EM2209335-006	EM2209335-007
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids								
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_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS	SX_OB_20220519_15_49_SS_Primary_ALS
Sampling date / time				19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
Compound	CAS Number	LOR	Unit	EM2209335-001	EM2209335-002	EM2209335-003	EM2209335-006	EM2209335-007
				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	%	111	121	121	116	110
EP074S: VOC Surrogates (Ultra-Trace)								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	91.8	90.7	89.0	83.3	85.4
Toluene-D8	2037-26-5	0.1	%	92.6	91.4	90.6	85.8	84.5
4-Bromofluorobenzene	460-00-4	0.1	%	99.6	100	102	95.3	96.0
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	86.5	97.7	105	88.3	82.6
2-Chlorophenol-D4	93951-73-6	0.025	%	82.4	93.8	99.2	87.3	80.4
2,4,6-Tribromophenol	118-79-6	0.025	%	86.1	94.4	103	91.0	84.4
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								
Nitrobenzene-D5	4165-60-0	0.025	%	84.9	96.3	100	86.3	84.2
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	84.2	92.5	98.8	87.0	82.7
2-Fluorobiphenyl	321-60-8	0.025	%	89.8	99.7	106	93.9	87.8
Anthracene-d10	1719-06-8	0.025	%	90.8	101	107	93.6	89.2
4-Terphenyl-d14	1718-51-0	0.025	%	93.0	103	110	96.9	90.9
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	102	96.9	121	93.7	102
13C8-PFOA	----	0.0002	%	98.6	99.8	112	91.6	101



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_IB_20220519_15_58_SS_Triplicate_ALS	SX_IB_20220519_16_07_SS_Primary_ALS	SX_IB_20220519_20_06_SS_Triplicate_ALS	SX_IB_20220519_20_10_SS_Primary_ALS	SX_IB_20220520_00_01_SS_Primary_ALS
Sampling date / time				19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01	
Compound	CAS Number	LOR	Unit	EM2209335-008	EM2209335-009	EM2209335-010	EM2209335-011	EM2209335-012	
				Result	Result	Result	Result	Result	
EA001: pH in soil using 0.01M CaCl extract									
pH (CaCl ₂)	----	0.1	pH Unit	7.6	7.9	7.7	7.7	7.7	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%	31.8	28.5	25.4	27.6	30.3	
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg	20	21	24	33	23	
Cadmium	7440-43-9	1	mg/kg	<1	<1	1	1	<1	
Chromium	7440-47-3	5	mg/kg	134	133	127	133	140	
Copper	7440-50-8	5	mg/kg	67	60	63	70	61	
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	188	184	175	187	181	
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	108	98	96	101	104	
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	2.2	1.6	2.2	1.3	2.4	
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	270	300	280	330	300	
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)									
Initial pH	----	0.1	pH Unit	8.7	8.3	8.6	8.7	9.0	
After HCl pH	----	0.1	pH Unit	1.6	1.6	1.5	1.6	1.5	
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	5.0	5.0	
Final pH	----	0.1	pH Unit	5.1	5.1	5.1	5.1	5.1	
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	



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220519_15_58_SS_Triplicate_ALS	SX_IB_20220519_16_07_SS_Primary_ALS	SX_IB_20220519_20_06_SS_Triplicate_ALS	SX_IB_20220519_20_10_SS_Primary_ALS	SX_IB_20220520_00_01_SS_Primary_ALS
Sampling date / time				19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01
Compound	CAS Number	LOR	Unit	EM2209335-008	EM2209335-009	EM2209335-010	EM2209335-011	EM2209335-012
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3	106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
[^] 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
1,1,1,2,2-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_20220519_15_58_SS_Triplicate_ALS	SX_IB_20220519_16_07_SS_Primary_ALS	SX_IB_20220519_20_06_SS_Triplicate_ALS	SX_IB_20220519_20_10_SS_Primary_ALS	SX_IB_20220520_00_01_SS_Primary_ALS
Sampling date / time				19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01
Compound	CAS Number	LOR	Unit	EM2209335-008	EM2209335-009	EM2209335-010	EM2209335-011	EM2209335-012
				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
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220519_15_58_SS_Triplicate_ALS	SX_IB_20220519_16_07_SS_Primary_ALS	SX_IB_20220519_20_06_SS_Triplicate_ALS	SX_IB_20220519_20_10_SS_Primary_ALS	SX_IB_20220520_00_01_SS_Primary_ALS
Sampling date / time				19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01
Compound	CAS Number	LOR	Unit	EM2209335-008	EM2209335-009	EM2209335-010	EM2209335-011	EM2209335-012
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
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
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-29-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_IB_20220519_15_58_SS_Triplicate_ALS	SX_IB_20220519_16_07_SS_Primary_ALS	SX_IB_20220519_20_06_SS_Triplicate_ALS	SX_IB_20220519_20_10_SS_Primary_ALS	SX_IB_20220520_00_01_SS_Primary_ALS
Sampling date / time				19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01	
Compound	CAS Number	LOR	Unit	EM2209335-008	EM2209335-009	EM2209335-010	EM2209335-011	EM2209335-012	
				Result	Result	Result	Result	Result	
EP075I: Organochlorine Pesticides - Continued									
^ Sum of other organochlorine pesticides				----	0.03	mg/kg	<0.03	<0.03	<0.03
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction				----	20	mg/kg	<20	<20	<20
C10 - C14 Fraction				----	50	mg/kg	<50	<50	<50
C6 - C10 Fraction				C6_C10	20	mg/kg	<20	<20	<20
C15 - C28 Fraction				----	100	mg/kg	<100	<100	<100
C29 - C36 Fraction				----	100	mg/kg	<100	<100	<100
^ C10 - C36 Fraction (sum)				----	50	mg/kg	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
>C10 - C16 Fraction				----	50	mg/kg	<50	<50	<50
>C16 - C34 Fraction				----	100	mg/kg	<100	<100	<100
>C34 - C40 Fraction				----	100	mg/kg	<100	<100	<100
^ >C10 - C40 Fraction (sum)				----	50	mg/kg	<50	<50	<50
>C10 - C16 Fraction minus Naphthalene (F2)				----	50	mg/kg	<50	<50	<50
C6 - C10 Fraction minus BTEX (F1)				C6_C10-BTEX	20	mg/kg	<20	<20	<20
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)				375-73-5	5.0	µg/kg	<5.0	<5.0	<5.0
Perfluoropentane sulfonic acid (PFPeS)				2706-91-4	5.0	µg/kg	<5.0	<5.0	<5.0
Perfluorohexane sulfonic acid (PFHxS)				355-46-4	5.0	µg/kg	<5.0	<5.0	<5.0
Perfluoroheptane sulfonic acid (PFHpS)				375-92-8	5.0	µg/kg	<5.0	<5.0	<5.0
Perfluorooctane sulfonic acid (PFOS)				1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0
Perfluorodecane sulfonic acid (PFDS)				335-77-3	5.0	µg/kg	<5.0	<5.0	<5.0
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)				375-22-4	5	µg/kg	<5	<5	<5
Perfluoropentanoic acid (PFPeA)				2706-90-3	5.0	µg/kg	<5.0	<5.0	<5.0
Perfluorohexanoic acid (PFHxA)				307-24-4	5.0	µg/kg	<5.0	<5.0	<5.0
Perfluoroheptanoic acid (PFHpA)				375-85-9	5.0	µg/kg	<5.0	<5.0	<5.0



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_IB_20220519_15_58_SS_Triplicate_ALS	SX_IB_20220519_16_07_SS_Primary_ALS	SX_IB_20220519_20_06_SS_Triplicate_ALS	SX_IB_20220519_20_10_SS_Primary_ALS	SX_IB_20220520_00_01_SS_Primary_ALS
Sampling date / time				19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01	
Compound	CAS Number	LOR	Unit	EM2209335-008	EM2209335-009	EM2209335-010	EM2209335-011	EM2209335-012	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
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									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10.0	µg/kg	<10.0	<10.0	<10.0	<10.0	<10.0	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	5.0	µg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_IB_20220519_15_58_SS_Triplicate_ALS	SX_IB_20220519_16_07_SS_Primary_ALS	SX_IB_20220519_20_06_SS_Triplicate_ALS	SX_IB_20220519_20_10_SS_Primary_ALS	SX_IB_20220520_00_01_SS_Primary_ALS
Sampling date / time				19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01	
Compound	CAS Number	LOR	Unit	EM2209335-008	EM2209335-009	EM2209335-010	EM2209335-011	EM2209335-012	
				Result	Result	Result	Result	Result	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
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	%	122	118	121	121	122	
EP074S: VOC Surrogates (Ultra-Trace)									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	89.6	89.5	76.8	91.0	89.9	
Toluene-D8	2037-26-5	0.1	%	92.3	93.4	80.7	94.9	91.0	
4-Bromofluorobenzene	460-00-4	0.1	%	102	104	89.5	104	98.7	
EP075S: Acid Extractable Surrogates (Waste Classification)									
Phenol-d6	13127-88-3	0.025	%	123	92.6	109	117	119	
2-Chlorophenol-D4	93951-73-6	0.025	%	117	89.6	103	111	112	
2,4,6-Tribromophenol	118-79-6	0.025	%	120	92.6	106	112	115	
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)									
Nitrobenzene-D5	4165-60-0	0.025	%	119	92.2	106	114	115	
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	116	89.2	103	109	110	
2-Fluorobiphenyl	321-60-8	0.025	%	124	95.8	110	117	119	
Anthracene-d10	1719-06-8	0.025	%	124	96.0	111	118	118	
4-Terphenyl-d14	1718-51-0	0.025	%	131	100	114	124	123	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%	82.2	98.8	88.8	92.0	96.3	
13C8-PFOA	----	0.0002	%	92.8	109	93.4	95.6	108	



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220520_04_06_SS_Primary_ALS	SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS
Sampling date / time				20-May-2022 04:06	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57
Compound	CAS Number	LOR	Unit	EM2209335-013	EM2209335-014	EM2209335-015	EM2209335-016	EM2209335-017
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl ₂)	----	0.1	pH Unit	7.8	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	29.0	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	152	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	5	mg/kg	72	----	----	----	----
Copper	7440-50-8	5	mg/kg	58	----	----	----	----
Lead	7439-92-1	5	mg/kg	<5	----	----	----	----
Molybdenum	7439-98-7	5	mg/kg	<5	----	----	----	----
Nickel	7440-02-0	5	mg/kg	109	----	----	----	----
Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----
Silver	7440-22-4	2	mg/kg	<2	----	----	----	----
Tin	7440-31-5	10	mg/kg	<10	----	----	----	----
Zinc	7440-66-6	5	mg/kg	66	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	1.0	mg/kg	<1.0	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	5	mg/kg	<5	----	----	----	----
EK040T: Fluoride Total								
Fluoride	16984-48-8	100	mg/kg	250	----	----	----	----
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Initial pH	----	0.1	pH Unit	7.4	----	----	----	----
After HCl pH	----	0.1	pH Unit	1.6	----	----	----	----
Extraction Fluid pH	----	0.1	pH Unit	5.0	----	----	----	----
Final pH	----	0.1	pH Unit	5.1	----	----	----	----
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Final pH	----	0.1	pH Unit	----	9.5	9.4	9.1	9.5
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220520_04_06_SS_Primary_ALS	SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS
Sampling date / time				20-May-2022 04:06	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57
Compound	CAS Number	LOR	Unit	EM2209335-013	EM2209335-014	EM2209335-015	EM2209335-016	EM2209335-017
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	----	----
Styrene	100-42-5	0.5	mg/kg	<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	----	----	----
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	<1	----	----	----	----
EP074I: Volatile Halogenated Compounds								
Vinyl chloride	75-01-4	0.50	mg/kg	<0.50	----	----	----	----
1,1-Dichloroethene	75-35-4	0.50	mg/kg	<0.50	----	----	----	----
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	----	----	----	----
trans-1,2-Dichloroethene	156-60-5	0.50	mg/kg	<0.50	----	----	----	----
cis-1,2-Dichloroethene	156-59-2	0.50	mg/kg	<0.50	----	----	----	----
Chloroform	67-66-3	0.50	mg/kg	<0.50	----	----	----	----
1,1,1-Trichloroethane	71-55-6	0.50	mg/kg	<0.50	----	----	----	----
Carbon Tetrachloride	56-23-5	0.50	mg/kg	<0.50	----	----	----	----
1,2-Dichloroethane	107-06-2	0.50	mg/kg	<0.50	----	----	----	----
Trichloroethene	79-01-6	0.50	mg/kg	<0.50	----	----	----	----
1,1,2-Trichloroethane	79-00-5	0.50	mg/kg	<0.50	----	----	----	----
Tetrachloroethene	127-18-4	0.50	mg/kg	<0.50	----	----	----	----
1,1,1,2-Tetrachloroethane	630-20-6	0.50	mg/kg	<0.50	----	----	----	----
1,1,2,2-Tetrachloroethane	79-34-5	0.50	mg/kg	<0.50	----	----	----	----
Hexachlorobutadiene	87-68-3	0.50	mg/kg	<0.50	----	----	----	----
Chlorobenzene	108-90-7	0.50	mg/kg	<0.50	----	----	----	----
1,4-Dichlorobenzene	106-46-7	0.50	mg/kg	<0.50	----	----	----	----
1,2-Dichlorobenzene	95-50-1	0.50	mg/kg	<0.50	----	----	----	----
1,2,4-Trichlorobenzene	120-82-1	0.50	mg/kg	<0.50	----	----	----	----
^ Sum of volatile chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	----	----	----	----
^ Sum of other chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220520_04_06_SS_Primary_ALS	SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS
Sampling date / time				20-May-2022 04:06	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57
Compound	CAS Number	LOR	Unit	EM2209335-013	EM2209335-014	EM2209335-015	EM2209335-016	EM2209335-017
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Halogenated)								
2-Chlorophenol	95-57-8	0.50	mg/kg	<0.50	----	----	----	----
2,4-Dichlorophenol	120-83-2	0.50	mg/kg	<0.50	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.50	mg/kg	<0.50	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<1.00	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	1.00	mg/kg	<1.00	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<1.00	----	----	----	----
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	----	----	----	----
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	----	----	----	----
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	----	----	----	----
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<1.00	----	----	----	----
EP075A: Phenolic Compounds (Non-halogenated)								
Phenol	108-95-2	1	mg/kg	<1	----	----	----	----
2-Methylphenol	95-48-7	1	mg/kg	<1	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	----	----	----
2-Nitrophenol	88-75-5	1	mg/kg	<1	----	----	----	----
2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	----	----	----	----
2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	----	----	----	----
4-Nitrophenol	100-02-7	5	mg/kg	<5	----	----	----	----
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	----	----	----	----
Dinoseb	88-85-7	20	mg/kg	<20	----	----	----	----
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	20	mg/kg	<20	----	----	----	----
^ Sum of Phenols (non-halogenated)	----	20	mg/kg	<20	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220520_04_06_SS_Primary_ALS	SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS
Sampling date / time				20-May-2022 04:06	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57
Compound	CAS Number	LOR	Unit	EM2209335-013	EM2209335-014	EM2209335-015	EM2209335-016	EM2209335-017
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	----	----	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	----	----	----	----
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	----	----	----	----
Endosulfan 1	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan 2	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.05	mg/kg	<0.05	----	----	----	----
Methoxychlor	72-43-5	0.05	mg/kg	<0.05	----	----	----	----
^ Sum of organochlorine pesticides	----	0.10	mg/kg	<0.10	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220520_04_06_SS_Primary_ALS	SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS
Sampling date / time				20-May-2022 04:06	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57
Compound	CAS Number	LOR	Unit	EM2209335-013	EM2209335-014	EM2209335-015	EM2209335-016	EM2209335-017
				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	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	----	----	----	----
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	----	----	----	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	mg/kg	<20	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	----	----
C6 - C10 Fraction	C6_C10	20	mg/kg	<20	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
>C10 - C16 Fraction	----	50	mg/kg	<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	----	----	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	mg/kg	<20	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	5.0	µg/kg	<5.0	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	5.0	µg/kg	<5.0	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	5.0	µg/kg	<5.0	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	5.0	µg/kg	<5.0	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	5.0	µg/kg	<5.0	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	5.0	µg/kg	<5.0	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220520_04_06_SS_Primary_ALS	SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS
Sampling date / time				20-May-2022 04:06	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57
Compound	CAS Number	LOR	Unit	EM2209335-013	EM2209335-014	EM2209335-015	EM2209335-016	EM2209335-017
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	5	µg/kg	<5	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	5.0	µg/kg	<5.0	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	5.0	µg/kg	<5.0	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	5.0	µg/kg	<5.0	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	5.0	µg/kg	<5.0	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	5.0	µg/kg	<5.0	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	5.0	µg/kg	<5.0	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	5.0	µg/kg	<5.0	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	5.0	µg/kg	<5.0	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	5.0	µg/kg	<5.0	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	5.0	µg/kg	<5.0	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	5.0	µg/kg	<5.0	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	5.0	µg/kg	<5.0	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	5.0	µg/kg	<5.0	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	5.0	µg/kg	<5.0	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	5.0	µg/kg	<5.0	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	10.0	µg/kg	<10.0	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	10.0	µg/kg	<10.0	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220520_04_06_SS_Primary_ALS	SX_IB_20220519_07_51_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS	SX_OB_20220519_08_00_SS_Duplicate_ALS	SX_IB_20220519_11_57_SS_Primary_ALS
Sampling date / time				20-May-2022 04:06	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57
Compound	CAS Number	LOR	Unit	EM2209335-013	EM2209335-014	EM2209335-015	EM2209335-016	EM2209335-017
				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	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10.0	µg/kg	<10.0	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	5.0	µg/kg	<5.0	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	5.0	µg/kg	<5.0	----	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	50.0	µg/kg	<50.0	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	5.0	µg/kg	<5.0	----	----	----	----
Sum of PFAS (WA DER List)	----	10.0	µg/kg	<10.0	----	----	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	118	----	----	----	----
EP074S: VOC Surrogates (Ultra-Trace)								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	87.4	----	----	----	----
Toluene-D8	2037-26-5	0.1	%	89.8	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	98.0	----	----	----	----
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	97.9	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%	93.2	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.025	%	97.8	----	----	----	----
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								
Nitrobenzene-D5	4165-60-0	0.025	%	96.4	----	----	----	----
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	93.2	----	----	----	----
2-Fluorobiphenyl	321-60-8	0.025	%	99.8	----	----	----	----
Anthracene-d10	1719-06-8	0.025	%	100	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.025	%	104	----	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	89.0	----	----	----	----
13C8-PFOA	----	0.0002	%	96.9	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220519_15_49_SS_Primary_ALS	SX_IB_20220519_15_58_SS_Triplicate_ALS	SX_IB_20220519_16_07_SS_Primary_ALS	SX_IB_20220519_20_06_SS_Triplicate_ALS	SX_IB_20220519_20_10_SS_Primary_ALS
Sampling date / time				19-May-2022 15:49	19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10
Compound	CAS Number	LOR	Unit	EM2209335-018	EM2209335-019	EM2209335-020	EM2209335-021	EM2209335-022
				Result	Result	Result	Result	Result
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Final pH	----	0.1	pH Unit	9.5	9.5	9.5	9.6	9.6



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SX_IB_20220520_00_01_SS_Primary_ALS	SX_OB_20220520_04_06_SS_Primary_ALS	----	----	----
Sampling date / time				20-May-2022 00:01	20-May-2022 04:06	----	----	----	
Compound	CAS Number	LOR	Unit	EM2209335-023	EM2209335-024	-----	-----	-----	
				Result	Result	---	---	---	
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)									
Final pH	----	0.1	pH Unit	9.5	9.4	----	----	----	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID		SX_IB_20220519_08_43_SR_Rinsate_ALS	SX_IB_20220519_08_44_SB_Blank_ALS	----	----	----
Sampling date / time			19-May-2022 08:43		19-May-2022 08:44		----	----	----
Compound	CAS Number	LOR	Unit	EM2209335-004	EM2209335-005	-----	-----	-----	
				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	0.10	µg/L	<0.10	<0.10	----	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----	



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SX_IB_20220519_08_43_SR_Rinsate_ALS	SX_IB_20220519_08_44_SB_Blank_ALS	----	----	----
Sampling date / time				19-May-2022 08:43	19-May-2022 08:44	----	----	----	
Compound	CAS Number	LOR	Unit	EM2209335-004	EM2209335-005	-----	-----	-----	
				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	0.02	µg/L	<0.02	<0.02	----	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	----	----	----	
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	----	0.01	µg/L	<0.01	<0.01	----	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----	
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	----	----	----	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%	101	86.9	----	----	----	
13C8-PFOA	----	0.02	%	98.1	97.4	----	----	----	



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

Automated Guideline Comparison Report

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

Work Order	: EM2209335	Page	: 1 of 33
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: DAVID LAWSON		
Address	: D1.1 63-85 TURNER STREET PORT MELBOURNE 3207	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: david.lawson@agonenviro.com.au	E-mail	: Josh.Alexander@alsglobal.com
Telephone	: ----	Telephone	: +61-3-8549 9600
Facsimile	: ----	Facsimile	: +61-3-8549 9626
Project	: JC0927	Date Received	: 20-May-2022 09:50
Order number	: ----	Date Analysed	: 21-May-2022
C-O-C number	: 20220520043942-ALS-52	Date Issued	: 27-May-2022 17:09
No. of samples received	: 24		
No. of samples analysed	: 24	Quote number	: EN/150/19 -WGTP -Bulk Sample Quote

General Comments

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

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

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

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

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



Summary of Thresholds Reached or Exceeded

EPA Victoria Publication IWRG 621 (2009)

Table 2: Soil Hazard Categorisation Thresholds : Fill Material

Client Sample ID	ALS Sample ID	Compound	Method	LOR	Limits	Result
SX_IB_20220519_07_51_S S_Primary_ALS	EM2209335-001	Arsenic	EG005T	5	< 20 mg/kg	22 mg/kg
SX_IB_20220519_07_51_S S_Primary_ALS	EM2209335-001	Nickel	EG005T	5	< 60 mg/kg	186 mg/kg
SX_IB_20220519_07_51_S S_Primary_ALS	EM2209335-001	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	2.2 mg/kg
SX_OB_20220519_07_59_ SS_Primary_ALS	EM2209335-002	Arsenic	EG005T	5	< 20 mg/kg	53 mg/kg
SX_OB_20220519_07_59_ SS_Primary_ALS	EM2209335-002	Nickel	EG005T	5	< 60 mg/kg	140 mg/kg
SX_OB_20220519_07_59_ SS_Primary_ALS	EM2209335-002	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	1.2 mg/kg
SX_OB_20220519_08_00_ SS_Duplicate_ALS	EM2209335-003	Arsenic	EG005T	5	< 20 mg/kg	27 mg/kg
SX_OB_20220519_08_00_ SS_Duplicate_ALS	EM2209335-003	Nickel	EG005T	5	< 60 mg/kg	153 mg/kg
SX_IB_20220519_11_57_S S_Primary_ALS	EM2209335-006	Arsenic	EG005T	5	< 20 mg/kg	21 mg/kg
SX_IB_20220519_11_57_S S_Primary_ALS	EM2209335-006	Nickel	EG005T	5	< 60 mg/kg	176 mg/kg
SX_IB_20220519_11_57_S S_Primary_ALS	EM2209335-006	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	3.0 mg/kg
SX_OB_20220519_15_49_ SS_Primary_ALS	EM2209335-007	Arsenic	EG005T	5	< 20 mg/kg	54 mg/kg
SX_OB_20220519_15_49_ SS_Primary_ALS	EM2209335-007	Nickel	EG005T	5	< 60 mg/kg	155 mg/kg
SX_IB_20220519_15_58_S S_Triplicate_ALS	EM2209335-008	Arsenic	EG005T	5	< 20 mg/kg	20 mg/kg
SX_IB_20220519_15_58_S S_Triplicate_ALS	EM2209335-008	Nickel	EG005T	5	< 60 mg/kg	188 mg/kg
SX_IB_20220519_15_58_S S_Triplicate_ALS	EM2209335-008	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	2.2 mg/kg
SX_IB_20220519_16_07_S S_Primary_ALS	EM2209335-009	Arsenic	EG005T	5	< 20 mg/kg	21 mg/kg
SX_IB_20220519_16_07_S S_Primary_ALS	EM2209335-009	Nickel	EG005T	5	< 60 mg/kg	184 mg/kg
SX_IB_20220519_16_07_S S_Primary_ALS	EM2209335-009	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	1.6 mg/kg



EPA Victoria Publication IWRG 621 (2009)

Table 2: Soil Hazard Categorisation Thresholds : Fill Material

Client Sample ID	ALS Sample ID	Compound	Method	LOR	Limits	Result
SX_IB_20220519_20_06_S S_Triplicate_ALS	EM2209335-010	Arsenic	EG005T	5	< 20 mg/kg	24 mg/kg
SX_IB_20220519_20_06_S S_Triplicate_ALS	EM2209335-010	Nickel	EG005T	5	< 60 mg/kg	175 mg/kg
SX_IB_20220519_20_06_S S_Triplicate_ALS	EM2209335-010	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	2.2 mg/kg
SX_IB_20220519_20_10_S S_Primary_ALS	EM2209335-011	Arsenic	EG005T	5	< 20 mg/kg	33 mg/kg
SX_IB_20220519_20_10_S S_Primary_ALS	EM2209335-011	Nickel	EG005T	5	< 60 mg/kg	187 mg/kg
SX_IB_20220519_20_10_S S_Primary_ALS	EM2209335-011	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	1.3 mg/kg
SX_IB_20220520_00_01_S S_Primary_ALS	EM2209335-012	Arsenic	EG005T	5	< 20 mg/kg	23 mg/kg
SX_IB_20220520_00_01_S S_Primary_ALS	EM2209335-012	Nickel	EG005T	5	< 60 mg/kg	181 mg/kg
SX_IB_20220520_00_01_S S_Primary_ALS	EM2209335-012	Hexavalent Chromium	EG048G	1.0	< 1 mg/kg	2.4 mg/kg
SX_OB_20220520_04_06_ SS_Primary_ALS	EM2209335-013	Arsenic	EG005T	5	< 20 mg/kg	152 mg/kg
SX_OB_20220520_04_06_ SS_Primary_ALS	EM2209335-013	Nickel	EG005T	5	< 60 mg/kg	109 mg/kg



Analytical Results

Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220 519_07_51_S S_Primary_AL S	SX_OB_20220 519_07_59_S S_Primary_AL S	SX_OB_20220 519_08_00_S S_Duplicate_ ALS	SX_IB_20220 519_11_57_S S_Primary_AL S	SX_OB_20220 519_15_49_S S_Primary_AL S	
				Sampling date/time	Guideline						Guideline
				Lower Limit	Upper Limit						
						19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49	
						EM2209335-001 MU	EM2209335-002 MU	EM2209335-003 MU	EM2209335-006 MU	EM2209335-007 MU	
EA001: pH in soil using 0.01M CaCl extract											
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5	7.7 ± 0.1	7.9 ± 0.1	7.7 ± 0.1	7.8 ± 0.1	7.8 ± 0.1	
EG005(ED093)T: Total Metals by ICP-AES											
Arsenic	EG005T	5	mg/kg	----	2000	22 ± 3	53 ± 7	27 ± 4	21 ± 3	54 ± 7	
Cadmium	EG005T	1	mg/kg	----	400	<1 --	<1 --	<1 --	<1 --	1 ± 0.2	
Copper	EG005T	5	mg/kg	----	20000	86 ± 10	57 ± 7	61 ± 7	62 ± 8	56 ± 7	
Lead	EG005T	5	mg/kg	----	6000	<5 --	6 ± 1.0	<5 --	<5 --	<5 --	
Molybdenum	EG005T	5	mg/kg	----	4000	<5 --	<5 --	<5 --	<5 --	<5 --	
Nickel	EG005T	5	mg/kg	----	12000	186 ± 18	140 ± 14	153 ± 15	176 ± 17	155 ± 15	
Selenium	EG005T	5	mg/kg	----	200	<5 --	<5 --	<5 --	<5 --	<5 --	
Silver	EG005T	2	mg/kg	----	720	<2 --	<2 --	<2 --	<2 --	<2 --	
Zinc	EG005T	5	mg/kg	----	140000	106 ± 12	94 ± 10	104 ± 11	105 ± 12	87 ± 10	
EG035T: Total Recoverable Mercury by FIMS											
Mercury	EG035T	0.1	mg/kg	----	300	<0.1 --	<0.1 --	<0.1 --	<0.1 --	<0.1 --	
EG048: Hexavalent Chromium (Alkaline Digest)											
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000	2.2 ± 0.4	1.2 ± 0.2	<1.0 --	3.0 ± 0.6	<1.0 --	
EK026SF: Total CN by Segmented Flow Analyser											
Total Cyanide	EK026SF	5	mg/kg	----	10000	<5 --	<5 --	<5 --	<5 --	<5 --	
EK040T: Fluoride Total											
Fluoride	EK040T	100	mg/kg	----	40000	300 ± 50	230 ± 40	250 ± 50	280 ± 50	190 ± 40	
EP074A: Monocyclic Aromatic Hydrocarbons											
Benzene	EP074-UT	0.2	mg/kg	----	16	<0.2 --	<0.2 --	<0.2 --	<0.2 --	<0.2 --	
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	240	<0.5 --	<0.5 --	<0.5 --	<0.5 --	<0.5 --	
EP074I: Volatile Halogenated Compounds											
Vinyl chloride	EP074-UT	0.50	mg/kg	----	4.8	<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --	
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	11	<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --	
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	50	<0.50 --	<0.50 --	<0.50 --	<0.50 --	<0.50 --	
EP075A: Phenolic Compounds (Halogenated)											
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	320	<1.00 --	<1.00 --	<1.00 --	<1.00 --	<1.00 --	



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_OB_20220	SX_OB_20220	SX_IB_20220	SX_OB_20220
				Guideline	Guideline	519_07_51_S	519_07_59_S	519_08_00_S	519_11_57_S	519_15_49_S
						S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
						EM2209335-001 MU	EM2209335-002 MU	EM2209335-003 MU	EM2209335-006 MU	EM2209335-007 MU
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	400	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP075I: Organochlorine Pesticides										
Heptachlor	EP075-EM	0.05	mg/kg	----	4.8	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	4.8	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	16	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	50	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	2600	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	40000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_OB_20220	SX_OB_20220	SX_IB_20220	SX_OB_20220
				Lower Limit	Upper Limit	519_07_51_S	519_07_59_S	519_08_00_S	519_11_57_S	519_15_49_S
						S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Primary_ALS
				Guideline	Guideline	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
						EM2209335-001 MU	EM2209335-002 MU	EM2209335-003 MU	EM2209335-006 MU	EM2209335-007 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.7 ± 0.1	7.9 ± 0.1	7.7 ± 0.1	7.8 ± 0.1	7.8 ± 0.1
EG005(ED093)T: Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	500	22 ± 3	53 ± 7	27 ± 4	21 ± 3	54 ± 7
Cadmium	EG005T	1	mg/kg	----	100	<1 ..	<1 ..	<1 ..	<1 ..	1 ± 0.2
Copper	EG005T	5	mg/kg	----	5000	86 ± 10	57 ± 7	61 ± 7	62 ± 8	56 ± 7
Lead	EG005T	5	mg/kg	----	1500	<5 ..	6 ± 1.0	<5 ..	<5 ..	<5 ..
Molybdenum	EG005T	5	mg/kg	----	1000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Nickel	EG005T	5	mg/kg	----	3000	186 ± 18	140 ± 14	153 ± 15	176 ± 17	155 ± 15
Selenium	EG005T	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Silver	EG005T	2	mg/kg	----	180	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..
Tin	EG005T	10	mg/kg	----	500	<10 ..	<10 ..	<10 ..	<10 ..	<10 ..
Zinc	EG005T	5	mg/kg	----	35000	106 ± 12	94 ± 10	104 ± 11	105 ± 12	87 ± 10
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	2.2 ± 0.4	1.2 ± 0.2	<1.0 ..	3.0 ± 0.6	<1.0 ..
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	10000	300 ± 50	230 ± 40	250 ± 50	280 ± 50	190 ± 40
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	4	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	70	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP074I: Volatile Halogenated Compounds										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	1.2	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	2.8	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	10	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	10	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_OB_20220	SX_OB_20220	SX_IB_20220	SX_OB_20220
				Guideline	Guideline	519_07_51_S	519_07_59_S	519_08_00_S	519_11_57_S	519_15_49_S
						S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
						EM2209335-001 MU	EM2209335-002 MU	EM2209335-003 MU	EM2209335-006 MU	EM2209335-007 MU
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	560	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	5	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	100	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP075I: Organochlorine Pesticides										
Heptachlor	EP075-EM	0.05	mg/kg	----	1.2	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	1.2	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	4	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	10	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	650	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	10000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_OB_20220	SX_OB_20220	SX_IB_20220	SX_OB_20220
				Lower Limit	Upper Limit	519_07_51_S	519_07_59_S	519_08_00_S	519_11_57_S	519_15_49_S
						S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Primary_ALS
						19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
						EM2209335-001 MU	EM2209335-002 MU	EM2209335-003 MU	EM2209335-006 MU	EM2209335-007 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.7 ± 0.1	7.9 ± 0.1	7.7 ± 0.1	7.8 ± 0.1	7.8 ± 0.1
EG005(ED093)T: Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	20	22 ± 3	53 ± 7	27 ± 4	21 ± 3	54 ± 7
Cadmium	EG005T	1	mg/kg	----	3	<1 ..	<1 ..	<1 ..	<1 ..	1 ± 0.2
Copper	EG005T	5	mg/kg	----	100	86 ± 10	57 ± 7	61 ± 7	62 ± 8	56 ± 7
Lead	EG005T	5	mg/kg	----	300	<5 ..	6 ± 1.0	<5 ..	<5 ..	<5 ..
Molybdenum	EG005T	5	mg/kg	----	40	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Nickel	EG005T	5	mg/kg	----	60	186 ± 18	140 ± 14	153 ± 15	176 ± 17	155 ± 15
Selenium	EG005T	5	mg/kg	----	10	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Silver	EG005T	2	mg/kg	----	10	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..
Tin	EG005T	10	mg/kg	----	50	<10 ..	<10 ..	<10 ..	<10 ..	<10 ..
Zinc	EG005T	5	mg/kg	----	200	106 ± 12	94 ± 10	104 ± 11	105 ± 12	87 ± 10
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	2.2 ± 0.4	1.2 ± 0.2	<1.0 ..	3.0 ± 0.6	<1.0 ..
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	450	300 ± 50	230 ± 40	250 ± 50	280 ± 50	190 ± 40
EP066: Polychlorinated Biphenyls (PCB)										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	1	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	7	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP074I: Volatile Halogenated Compounds										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..
EP075A: Phenolic Compounds (Non-halogenated)										



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_OB_20220	SX_OB_20220	SX_IB_20220	SX_OB_20220
				Guideline	Guideline	519_07_51_S	519_07_59_S	519_08_00_S	519_11_57_S	519_15_49_S
						S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57	19-May-2022 15:49
						EM2209335-001 MU	EM2209335-002 MU	EM2209335-003 MU	EM2209335-006 MU	EM2209335-007 MU
EP075A: Phenolic Compounds (Non-halogenated) - Continued										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	60	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	1	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP075I: Organochlorine Pesticides										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	100	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	1000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220 519_15_58_S S_Triplicate_ ALS	SX_IB_20220 519_16_07_S S_Primary_AL S	SX_IB_20220 519_20_06_S S_Triplicate_ ALS	SX_IB_20220 519_20_10_S S_Primary_AL S	SX_IB_20220 520_00_01_S S_Primary_AL S
				Guideline	Guideline	19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01
				Lower Limit	Upper Limit	EM2209335-008 MU	EM2209335-009 MU	EM2209335-010 MU	EM2209335-011 MU	EM2209335-012 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5	7.6 ± 0.1	7.9 ± 0.1	7.7 ± 0.1	7.7 ± 0.1	7.7 ± 0.1
EG005(ED093)T: Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	2000	20 ± 3	21 ± 3	24 ± 4	33 ± 4	23 ± 3
Cadmium	EG005T	1	mg/kg	----	400	<1 ..	<1 ..	1 ± 0.2	1 ± 0.2	<1 ..
Copper	EG005T	5	mg/kg	----	20000	67 ± 8	60 ± 7	63 ± 8	70 ± 8	61 ± 7
Lead	EG005T	5	mg/kg	----	6000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Molybdenum	EG005T	5	mg/kg	----	4000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Nickel	EG005T	5	mg/kg	----	12000	188 ± 18	184 ± 18	175 ± 17	187 ± 18	181 ± 18
Selenium	EG005T	5	mg/kg	----	200	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Silver	EG005T	2	mg/kg	----	720	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..
Zinc	EG005T	5	mg/kg	----	140000	108 ± 12	98 ± 11	96 ± 11	101 ± 11	104 ± 12
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	300	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000	2.2 ± 0.4	1.6 ± 0.3	2.2 ± 0.4	1.3 ± 0.2	2.4 ± 0.4
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	10000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	40000	270 ± 50	300 ± 50	280 ± 50	330 ± 60	300 ± 50
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	16	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	240	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP074I: Volatile Halogenated Compounds										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	4.8	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	11	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	50	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	320	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..
EP075A: Phenolic Compounds (Non-halogenated)										



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220 519_15_58_S S_Triplicate_ ALS	SX_IB_20220 519_16_07_S S_Primary_AL S	SX_IB_20220 519_20_06_S S_Triplicate_ ALS	SX_IB_20220 519_20_10_S S_Primary_AL S	SX_IB_20220 520_00_01_S S_Primary_AL S
				Guideline	Guideline					
				Lower Limit	Upper Limit					
						19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01
						EM2209335-008 MU	EM2209335-009 MU	EM2209335-010 MU	EM2209335-011 MU	EM2209335-012 MU
EP075A: Phenolic Compounds (Non-halogenated) - Continued										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	400	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP075I: Organochlorine Pesticides										
Heptachlor	EP075-EM	0.05	mg/kg	----	4.8	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	4.8	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	16	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	50	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	2600	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	40000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220 519_15_58_S S_Triplicate_ ALS	SX_IB_20220 519_16_07_S S_Primary_AL S	SX_IB_20220 519_20_06_S S_Triplicate_ ALS	SX_IB_20220 519_20_10_S S_Primary_AL S	SX_IB_20220 520_00_01_S S_Primary_AL S
				Guideline	Guideline	19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01
				Lower Limit	Upper Limit	EM2209335-008 MU	EM2209335-009 MU	EM2209335-010 MU	EM2209335-011 MU	EM2209335-012 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.6 ±0.1	7.9 ±0.1	7.7 ±0.1	7.7 ±0.1	7.7 ±0.1
EG005(ED093)T: Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	500	20 ±3	21 ±3	24 ±4	33 ±4	23 ±3
Cadmium	EG005T	1	mg/kg	----	100	<1 ..	<1 ..	1 ±0.2	1 ±0.2	<1 ..
Copper	EG005T	5	mg/kg	----	5000	67 ±8	60 ±7	63 ±8	70 ±8	61 ±7
Lead	EG005T	5	mg/kg	----	1500	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Molybdenum	EG005T	5	mg/kg	----	1000	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Nickel	EG005T	5	mg/kg	----	3000	188 ±18	184 ±18	175 ±17	187 ±18	181 ±18
Selenium	EG005T	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Silver	EG005T	2	mg/kg	----	180	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..
Tin	EG005T	10	mg/kg	----	500	<10 ..	<10 ..	<10 ..	<10 ..	<10 ..
Zinc	EG005T	5	mg/kg	----	35000	108 ±12	98 ±11	96 ±11	101 ±11	104 ±12
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	2.2 ±0.4	1.6 ±0.3	2.2 ±0.4	1.3 ±0.2	2.4 ±0.4
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	10000	270 ±50	300 ±50	280 ±50	330 ±60	300 ±50
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	4	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	70	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP074I: Volatile Halogenated Compounds										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	1.2	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	2.8	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	10	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	10	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_IB_20220	SX_IB_20220	SX_IB_20220	SX_IB_20220
				Guideline	Guideline	519_15_58_S	519_16_07_S	519_20_06_S	519_20_10_S	520_00_01_S
						S_Triplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01
						EM2209335-008 MU	EM2209335-009 MU	EM2209335-010 MU	EM2209335-011 MU	EM2209335-012 MU
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	560	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	5	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	100	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP075I: Organochlorine Pesticides										
Heptachlor	EP075-EM	0.05	mg/kg	----	1.2	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	1.2	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..	<0.30 ..
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..	<0.05 ..
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	4	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	10	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..	<0.03 ..
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	650	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	10000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220 519_15_58_S S_Triplicate_ ALS	SX_IB_20220 519_16_07_S S_Primary_AL S	SX_IB_20220 519_20_06_S S_Triplicate_ ALS	SX_IB_20220 519_20_10_S S_Primary_AL S	SX_IB_20220 520_00_01_S S_Primary_AL S
				Guideline	Guideline	19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01
				Lower Limit	Upper Limit	EM2209335-008 MU	EM2209335-009 MU	EM2209335-010 MU	EM2209335-011 MU	EM2209335-012 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.6 ±0.1	7.9 ±0.1	7.7 ±0.1	7.7 ±0.1	7.7 ±0.1
EG005(ED093)T: Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	20	20 ±3	21 ±3	24 ±4	33 ±4	23 ±3
Cadmium	EG005T	1	mg/kg	----	3	<1 ..	<1 ..	1 ±0.2	1 ±0.2	<1 ..
Copper	EG005T	5	mg/kg	----	100	67 ±8	60 ±7	63 ±8	70 ±8	61 ±7
Lead	EG005T	5	mg/kg	----	300	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Molybdenum	EG005T	5	mg/kg	----	40	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Nickel	EG005T	5	mg/kg	----	60	188 ±18	184 ±18	175 ±17	187 ±18	181 ±18
Selenium	EG005T	5	mg/kg	----	10	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
Silver	EG005T	2	mg/kg	----	10	<2 ..	<2 ..	<2 ..	<2 ..	<2 ..
Tin	EG005T	10	mg/kg	----	50	<10 ..	<10 ..	<10 ..	<10 ..	<10 ..
Zinc	EG005T	5	mg/kg	----	200	108 ±12	98 ±11	96 ±11	101 ±11	104 ±12
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	2.2 ±0.4	1.6 ±0.3	2.2 ±0.4	1.3 ±0.2	2.4 ±0.4
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 ..	<5 ..	<5 ..	<5 ..	<5 ..
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	450	270 ±50	300 ±50	280 ±50	330 ±60	300 ±50
EP066: Polychlorinated Biphenyls (PCB)										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..	<0.1 ..
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	1	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..	<0.2 ..
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	7	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP074I: Volatile Halogenated Compounds										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..	<0.50 ..
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..	<1.00 ..
EP075A: Phenolic Compounds (Non-halogenated)										



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220	SX_IB_20220	SX_IB_20220	SX_IB_20220	SX_IB_20220
				Guideline	Guideline	519_15_58_S	519_16_07_S	519_20_06_S	519_20_10_S	520_00_01_S
						S_Triplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10	20-May-2022 00:01
						EM2209335-008 MU	EM2209335-009 MU	EM2209335-010 MU	EM2209335-011 MU	EM2209335-012 MU
EP075A: Phenolic Compounds (Non-halogenated) - Continued										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	60	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	1	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	20	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..	<0.5 ..
EP075I: Organochlorine Pesticides										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..	<0.10 ..
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	100	<20 ..	<20 ..	<20 ..	<20 ..	<20 ..
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	1000	<50 ..	<50 ..	<50 ..	<50 ..	<50 ..



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_IB_20220	SX_OB_20220	SX_OB_20220	SX_IB_20220
				Guideline	Guideline	520_04_06_S	519_07_51_S	519_07_59_S	519_08_00_S	519_11_57_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	20-May-2022 04:06	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57
						EM2209335-013 MU	EM2209335-014 MU	EM2209335-015 MU	EM2209335-016 MU	EM2209335-017 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	2	12.5	7.8 ± 0.1	----	----	----	----
EG005(ED093T): Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	2000	152 ± 18	----	----	----	----
Cadmium	EG005T	1	mg/kg	----	400	<1 --	----	----	----	----
Copper	EG005T	5	mg/kg	----	20000	58 ± 7	----	----	----	----
Lead	EG005T	5	mg/kg	----	6000	<5 --	----	----	----	----
Molybdenum	EG005T	5	mg/kg	----	4000	<5 --	----	----	----	----
Nickel	EG005T	5	mg/kg	----	12000	109 ± 11	----	----	----	----
Selenium	EG005T	5	mg/kg	----	200	<5 --	----	----	----	----
Silver	EG005T	2	mg/kg	----	720	<2 --	----	----	----	----
Zinc	EG005T	5	mg/kg	----	140000	66 ± 8	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	300	<0.1 --	----	----	----	----
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	2000	<1.0 --	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	10000	<5 --	----	----	----	----
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	40000	250 ± 50	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	16	<0.2 --	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	240	<0.5 --	----	----	----	----
EP074I: Volatile Halogenated Compounds										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	4.8	<0.50 --	----	----	----	----
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	11	<0.50 --	----	----	----	----
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	50	<0.50 --	----	----	----	----
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	320	<1.00 --	----	----	----	----
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	2200	<20 --	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons										



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_IB_20220	SX_OB_20220	SX_OB_20220	SX_IB_20220
				Guideline	Guideline	520_04_06_S	519_07_51_S	519_07_59_S	519_08_00_S	519_11_57_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	20-May-2022 04:06	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57
						EM2209335-013 MU	EM2209335-014 MU	EM2209335-015 MU	EM2209335-016 MU	EM2209335-017 MU
EP075B: Polynuclear Aromatic Hydrocarbons - Continued										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	20	<0.5	--	----	----	----
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	400	<0.5	--	----	----	----
EP075I: Organochlorine Pesticides										
Heptachlor	EP075-EM	0.05	mg/kg	----	4.8	<0.05	--	----	----	----
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	4.8	<0.30	--	----	----	----
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05	--	----	----	----
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	16	<0.10	--	----	----	----
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	50	<0.03	--	----	----	----
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	2600	<20	--	----	----	----
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	40000	<50	--	----	----	----



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_IB_20220	SX_OB_20220	SX_OB_20220	SX_IB_20220
				Guideline	Guideline	520_04_06_S	519_07_51_S	519_07_59_S	519_08_00_S	519_11_57_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	20-May-2022 04:06	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57
						EM2209335-013 MU	EM2209335-014 MU	EM2209335-015 MU	EM2209335-016 MU	EM2209335-017 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.8 ± 0.1	----	----	----	----
EG005(ED093T): Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	500	152 ± 18	----	----	----	----
Cadmium	EG005T	1	mg/kg	----	100	<1 --	----	----	----	----
Copper	EG005T	5	mg/kg	----	5000	58 ± 7	----	----	----	----
Lead	EG005T	5	mg/kg	----	1500	<5 --	----	----	----	----
Molybdenum	EG005T	5	mg/kg	----	1000	<5 --	----	----	----	----
Nickel	EG005T	5	mg/kg	----	3000	109 ± 11	----	----	----	----
Selenium	EG005T	5	mg/kg	----	50	<5 --	----	----	----	----
Silver	EG005T	2	mg/kg	----	180	<2 --	----	----	----	----
Tin	EG005T	10	mg/kg	----	500	<10 --	----	----	----	----
Zinc	EG005T	5	mg/kg	----	35000	66 ± 8	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	75	<0.1 --	----	----	----	----
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	500	<1.0 --	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	2500	<5 --	----	----	----	----
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	10000	250 ± 50	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	4	<0.2 --	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	70	<0.5 --	----	----	----	----
EP074I: Volatile Halogenated Compounds										
Vinyl chloride	EP074-UT	0.50	mg/kg	----	1.2	<0.50 --	----	----	----	----
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	2.8	<0.50 --	----	----	----	----
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	10	<0.50 --	----	----	----	----
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	10	<1.00 --	----	----	----	----
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	560	<20 --	----	----	----	----



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_IB_20220	SX_OB_20220	SX_OB_20220	SX_IB_20220
				Guideline	Guideline	520_04_06_S	519_07_51_S	519_07_59_S	519_08_00_S	519_11_57_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	20-May-2022 04:06	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57
						EM2209335-013 MU	EM2209335-014 MU	EM2209335-015 MU	EM2209335-016 MU	EM2209335-017 MU
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	5	<0.5	--	----	----	----
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	100	<0.5	--	----	----	----
EP075I: Organochlorine Pesticides										
Heptachlor	EP075-EM	0.05	mg/kg	----	1.2	<0.05	--	----	----	----
Sum of Aldrin + Dieldrin	EP075-EM-SUM	0.30	mg/kg	----	1.2	<0.30	--	----	----	----
Sum of DDD + DDE + DDT	EP075-EM-SUM	0.05	mg/kg	----	50	<0.05	--	----	----	----
Chlordane	EP075-EM-SUM	0.10	mg/kg	----	4	<0.10	--	----	----	----
Sum of other organochlorine pesticides	EP075-EM-SUM	0.03	mg/kg	----	10	<0.03	--	----	----	----
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	650	<20	--	----	----	----
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	10000	<50	--	----	----	----



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_IB_20220	SX_OB_20220	SX_OB_20220	SX_IB_20220
				Guideline	Guideline	520_04_06_S	519_07_51_S	519_07_59_S	519_08_00_S	519_11_57_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	20-May-2022 04:06	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57
						EM2209335-013 MU	EM2209335-014 MU	EM2209335-015 MU	EM2209335-016 MU	EM2209335-017 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	4	9	7.8 ± 0.1	----	----	----	----
EG005(ED093T): Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	20	152 ± 18	----	----	----	----
Cadmium	EG005T	1	mg/kg	----	3	<1 --	----	----	----	----
Copper	EG005T	5	mg/kg	----	100	58 ± 7	----	----	----	----
Lead	EG005T	5	mg/kg	----	300	<5 --	----	----	----	----
Molybdenum	EG005T	5	mg/kg	----	40	<5 --	----	----	----	----
Nickel	EG005T	5	mg/kg	----	60	109 ± 11	----	----	----	----
Selenium	EG005T	5	mg/kg	----	10	<5 --	----	----	----	----
Silver	EG005T	2	mg/kg	----	10	<2 --	----	----	----	----
Tin	EG005T	10	mg/kg	----	50	<10 --	----	----	----	----
Zinc	EG005T	5	mg/kg	----	200	66 ± 8	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	1	<0.1 --	----	----	----	----
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	1	<1.0 --	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	50	<5 --	----	----	----	----
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	450	250 ± 50	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)										
Total Polychlorinated biphenyls	EP066-EM	0.1	mg/kg	----	2	<0.1 --	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	1	<0.2 --	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	7	<0.5 --	----	----	----	----
EP074I: Volatile Halogenated Compounds										
Sum of volatile chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	1	<0.50 --	----	----	----	----
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	1	<1.00 --	----	----	----	----
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	60	<20 --	----	----	----	----



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_IB_20220	SX_OB_20220	SX_OB_20220	SX_IB_20220
				Guideline	Guideline	520_04_06_S	519_07_51_S	519_07_59_S	519_08_00_S	519_11_57_S
						S_Primary_ALS	S_Primary_ALS	S_Primary_ALS	S_Duplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	20-May-2022 04:06	19-May-2022 07:51	19-May-2022 07:59	19-May-2022 08:00	19-May-2022 11:57
						EM2209335-013 MU	EM2209335-014 MU	EM2209335-015 MU	EM2209335-016 MU	EM2209335-017 MU
EP075B: Polynuclear Aromatic Hydrocarbons										
Benzo(a)pyrene	EP075-EM	0.5	mg/kg	----	1	<0.5	----	----	----	----
Sum of polycyclic aromatic hydrocarbons	EP075-EM-SUM	0.5	mg/kg	----	20	<0.5	----	----	----	----
EP075I: Organochlorine Pesticides										
Sum of organochlorine pesticides	EP075-EM-SUM	0.10	mg/kg	----	1	<0.10	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	EP074-UT	20	mg/kg	----	100	<20	----	----	----	----
C10 - C36 Fraction (sum)	EP071-EM	50	mg/kg	----	1000	<50	----	----	----	----



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_OB_20220	SX_IB_20220	SX_IB_20220	SX_IB_20220	SX_IB_20220
				Guideline	Guideline	519_15_49_S	519_15_58_S	519_16_07_S	519_20_06_S	519_20_10_S
						S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS	S_Triplicate_ALS	S_Primary_ALS
				Lower Limit	Upper Limit	19-May-2022 15:49	19-May-2022 15:58	19-May-2022 16:07	19-May-2022 20:06	19-May-2022 20:10
						EM2209335-018 MU	EM2209335-019 MU	EM2209335-020 MU	EM2209335-021 MU	EM2209335-022 MU
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----
EG005(ED093T): Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	----	----	----	----	----	----
Cadmium	EG005T	1	mg/kg	----	----	----	----	----	----	----
Copper	EG005T	5	mg/kg	----	----	----	----	----	----	----
Lead	EG005T	5	mg/kg	----	----	----	----	----	----	----
Molybdenum	EG005T	5	mg/kg	----	----	----	----	----	----	----
Nickel	EG005T	5	mg/kg	----	----	----	----	----	----	----
Selenium	EG005T	5	mg/kg	----	----	----	----	----	----	----
Silver	EG005T	2	mg/kg	----	----	----	----	----	----	----
Zinc	EG005T	5	mg/kg	----	----	----	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----
EP074I: Volatile Halogenated Compounds										
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	----	----	----	----	----	----
Vinyl chloride	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	----	----	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons										



Soil Hazard Categorisation and Management

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

Sub-Matrix: SOIL

Compound	Method	LOR	Unit	Sample ID		SX_IB_20220 520_00_01_S S_Primary_AL S	SX_OB_20220 520_04_06_S S_Primary_AL S	----	----	----
				Guideline	Guideline					
				Lower Limit	Upper Limit					
						20-May-2022 00:01	20-May-2022 04:06	----	----	----
						EM2209335-023 MU	EM2209335-024 MU			
EA001: pH in soil using 0.01M CaCl extract										
pH (CaCl2)	EA001	0.1	pH Unit	----	----	----	----	----	----	----
EG005(ED093T): Total Metals by ICP-AES										
Arsenic	EG005T	5	mg/kg	----	----	----	----	----	----	----
Cadmium	EG005T	1	mg/kg	----	----	----	----	----	----	----
Copper	EG005T	5	mg/kg	----	----	----	----	----	----	----
Lead	EG005T	5	mg/kg	----	----	----	----	----	----	----
Molybdenum	EG005T	5	mg/kg	----	----	----	----	----	----	----
Nickel	EG005T	5	mg/kg	----	----	----	----	----	----	----
Selenium	EG005T	5	mg/kg	----	----	----	----	----	----	----
Silver	EG005T	2	mg/kg	----	----	----	----	----	----	----
Zinc	EG005T	5	mg/kg	----	----	----	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS										
Mercury	EG035T	0.1	mg/kg	----	----	----	----	----	----	----
EG048: Hexavalent Chromium (Alkaline Digest)										
Hexavalent Chromium	EG048G	1.0	mg/kg	----	----	----	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser										
Total Cyanide	EK026SF	5	mg/kg	----	----	----	----	----	----	----
EK040T: Fluoride Total										
Fluoride	EK040T	100	mg/kg	----	----	----	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	EP074-UT	0.2	mg/kg	----	----	----	----	----	----	----
Sum of monocyclic aromatic hydrocarbons	EP074-UT-SUM	0.5	mg/kg	----	----	----	----	----	----	----
EP074I: Volatile Halogenated Compounds										
Hexachlorobutadiene	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
Sum of other chlorinated hydrocarbons	EP074-UT-SUM	0.50	mg/kg	----	----	----	----	----	----	----
Vinyl chloride	EP074-UT	0.50	mg/kg	----	----	----	----	----	----	----
EP075A: Phenolic Compounds (Halogenated)										
Sum of Phenols (halogenated)	EP075-EM-SUM	1.00	mg/kg	----	----	----	----	----	----	----
EP075A: Phenolic Compounds (Non-halogenated)										
Sum of Phenols (non-halogenated)	EP075-EM-SUM	20	mg/kg	----	----	----	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons										

QUALITY CONTROL REPORT

Work Order	: EM2209335	Page	: 1 of 32
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: DAVID LAWSON	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	: 20-May-2022
Order number	: ----	Date Analysis Commenced	: 21-May-2022
C-O-C number	: 20220520043942-ALS-52	Issue Date	: 27-May-2022
Sampler	: HK - EP Risk, Martha - Agon		
Site	: 20220520043942-ALS-52		
Quote number	: EN/150/19 -WGTP -Bulk Sample Quote		
No. of samples received	: 24		
No. of samples analysed	: 24		



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
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: 4357217)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EG005T: Arsenic	7440-38-2	5	mg/kg	22	15	40.7	No Limit
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	137	128	7.0	0% - 20%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	186	187	0.0	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	86	65	29.0	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<10	<10	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	106	98	7.9	0% - 20%
EM2209335-012	SX_IB_20220520_00_01_S S_Primary_ALS	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	140	124	12.2	0% - 20%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	181	198	9.1	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	23	24	4.9	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	61	69	13.4	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



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: 4357217) - continued									
EM2209335-012	SX_IB_20220520_00_01_S S_Primary_ALS	EG005T: Zinc	7440-66-6	5	mg/kg	104	110	5.1	0% - 20%
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4359993)									
EM2209285-002	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.8	7.8	0.0	0% - 20%
EM2209285-016	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.5	7.5	0.0	0% - 20%
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4359994)									
EM2209335-011	SX_IB_20220519_20_10_S S_Primary_ALS	EA001: pH (CaCl2)	----	0.1	pH Unit	7.7	7.7	0.0	0% - 20%
EM2209476-011	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	4.7	4.7	0.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4358664)									
EM2209044-001	Anonymous	EA055: Moisture Content	----	0.1	%	16.9	13.1	25.3	0% - 50%
EM2209044-011	Anonymous	EA055: Moisture Content	----	0.1	%	11.8	11.6	1.9	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4358665)									
EM2209335-002	SX_OB_20220519_07_59_ SS_Primary_ALS	EA055: Moisture Content	----	0.1	%	30.6	29.1	4.9	0% - 20%
EM2209340-001	Anonymous	EA055: Moisture Content	----	0.1	%	32.5	31.6	2.7	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4357216)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2209335-012	SX_IB_20220520_00_01_S S_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: 4358654)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	2.2	2.8	25.8	No Limit
EM2209335-012	SX_IB_20220520_00_01_S S_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	2.4	2.0	15.6	No Limit
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4359645)									
EM2209285-010	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EM2209335-008	SX_IB_20220519_15_58_S S_Triplicate_ALS	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<5	<5	0.0	No Limit
EK040T: Fluoride Total (QC Lot: 4358630)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EK040T: Fluoride	16984-48-8	40	mg/kg	300	370	21.2	No Limit
EM2209335-012	SX_IB_20220520_00_01_S S_Primary_ALS	EK040T: Fluoride	16984-48-8	40	mg/kg	300	250	20.9	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4357164)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	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 (%)
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4357164) - continued									
EM2209335-013	SX_OB_20220520_04_06_ 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: 4351190)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: meta- & para-Xylene	108-38-3 106-42-3	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
EM2209335-013	SX_OB_20220520_04_06_ 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: 4351190)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EM2209335-013	SX_OB_20220520_04_06_ SS_Primary_ALS	EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP074I: Volatile Halogenated Compounds (QC Lot: 4351190)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP074-UT: 1.1-Dichloroethene	75-35-4	0.01	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: cis-1.2-Dichloroethene	156-59-2	0.01	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: 1.1.1-Trichloroethane	71-55-6	0.01	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: 1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: 1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: trans-1.2-Dichloroethene	156-60-5	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: 1.2-Dichloroethane	107-06-2	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.50	<0.50	0.0	No Limit
		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



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: 4351190) - continued									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	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
EM2209335-013	SX_OB_20220520_04_06_ 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		
EP075A: Phenolic Compounds (Halogenated) (QC Lot: 4357163)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit		
EM2209335-013	SX_OB_20220520_04_06_ SS_Primary_ALS	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50	0.0	No Limit



Sub-Matrix: SOIL

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075A: Phenolic Compounds (Halogenated) (QC Lot: 4357163) - continued									
EM2209335-013	SX_OB_20220520_04_06_ SS_Primary_ALS	EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-9 0-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit
EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4357163)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: Dinoseb	88-85-7	5	mg/kg	<20	<20	0.0	No Limit
EM2209335-013	SX_OB_20220520_04_06_ SS_Primary_ALS	EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: Dinoseb	88-85-7	5	mg/kg	<20	<20	0.0	No Limit
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<20	<20	0.0	No Limit		
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4357163)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



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: 4357163) - continued									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	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
EM2209335-013	SX_OB_20220520_04_06_ 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: 4357163)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit



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: 4357163) - continued									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EP075-EM: 4,4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EM2209335-013	SX_OB_20220520_04_06_ 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		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4351190)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<20	<20	0.0	No Limit
EM2209335-013	SX_OB_20220520_04_06_ SS_Primary_ALS	EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<20	<20	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4357165)									



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: 4357165) - continued									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EM2209335-013	SX_OB_20220520_04_06_ 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: 4351190)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<20	<20	0.0	No Limit
		EP074-UT: C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<20	<20	0.0	No Limit
EM2209335-013	SX_OB_20220520_04_06_ 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: 4357165)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EM2209335-013	SX_OB_20220520_04_06_ 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: 4359436)									
EM2209269-022	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	0.0005	0.0007	29.4	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2209335-003	SX_OB_20220519_08_00_ 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



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 (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4359436) - continued									
EM2209335-003	SX_OB_20220519_08_00_ SS_Duplicate_ALS	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: 4359436)									
EM2209269-022	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 (PFTTrDA)	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
EM2209335-003	SX_OB_20220519_08_00_ SS_Duplicate_ALS	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	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
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4359436)	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



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: 4359436) - continued									
EM2209269-022	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2209335-003	SX_OB_20220519_08_00_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: 4359436)									
EM2209269-022	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
EM2209335-003	SX_OB_20220519_08_00_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: 4359436)									
EM2209269-022	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0005	0.0007	33.3	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0005	0.0007	33.3	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0005	0.0007	33.3	No Limit
EM2209335-003	SX_OB_20220519_08_00_SS_Duplicate_ALS	EP231X: Sum of PFAS	----	0.0002	mg/kg	<50.0 µg/kg	<0.0500	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 (%)
EP231P: PFAS Sums (QC Lot: 4359436) - continued									
EM2209335-003	SX_OB_20220519_08_00_SS_Duplicate_ALS	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: 4359188)									
EM2209335-004	SX_IB_20220519_08_43_S R_Rinsate_ALS	EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4362191)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2209335-013	SX_OB_20220520_04_06_SS_Primary_ALS	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4362196)									
EM2209335-014	SX_IB_20220519_07_51_S S_Primary_ALS	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit



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: 4362196) - continued									
EM2209335-014	SX_IB_20220519_07_51_S S_Primary_ALS	EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2209335-024	SX_OB_20220520_04_06_ SS_Primary_ALS	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4359188)									
EM2209335-004	SX_IB_20220519_08_43_S R_Rinsate_ALS	EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	<0.10	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4362191)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EM2209335-013	SX_OB_20220520_04_06_ SS_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit



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: 4362191) - continued									
EM2209335-013	SX_OB_20220520_04_06_ SS_Primary_ALS	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: 4362196)									
EM2209335-014	SX_IB_20220519_07_51_S S_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2209335-024	SX_OB_20220520_04_06_ SS_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2209335-004	SX_IB_20220519_08_43_S R_Rinsate_ALS	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit



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: 4359188) - continued									
EM2209335-004	SX_IB_20220519_08_43_S R_Rinsate_ALS	EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4362191)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2209335-013	SX_OB_20220520_04_06_ SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4362196)									



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: 4362196) - continued									
EM2209335-014	SX_IB_20220519_07_51_S S_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2209335-024	SX_OB_20220520_04_06_ SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4359188)									
EM2209335-004	SX_IB_20220519_08_43_S R_Rinsate_ALS	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4362191)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4362191) - continued									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2209335-013	SX_OB_20220520_04_06_ SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4362196)									
EM2209335-014	SX_IB_20220519_07_51_S S_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2209335-024	SX_OB_20220520_04_06_ SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4359188)									
EM2209335-004	SX_IB_20220519_08_43_S R_Rinsate_ALS	EP231X-INJ: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4362191)									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	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 (%)
EP231P: PFAS Sums (QC Lot: 4362191) - continued									
EM2209335-001	SX_IB_20220519_07_51_S S_Primary_ALS	EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit
EM2209335-013	SX_OB_20220520_04_06_ SS_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4362196)									
EM2209335-014	SX_IB_20220519_07_51_S S_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit
EM2209335-024	SX_OB_20220520_04_06_ SS_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit



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

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

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4357217)									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	106	70.0	130	
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	73.6	50.0	130	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	111	70.0	130	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	98.4	70.0	130	
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	96.8	70.0	130	
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	101	70.0	130	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	104	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	94.7	70.0	130	
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	119	70.0	130	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	90.6	70.0	130	
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4359343)									
EN60-DIa-P: Final pH	----	0.1	pH Unit	7.1	----	----	----	----	
EA001: pH in soil using 0.01M CaCl extract (QCLot: 4359993)									
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	99.8	98.8	101	
					7 pH Unit	99.6	99.3	101	
EA001: pH in soil using 0.01M CaCl extract (QCLot: 4359994)									
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	101	98.8	101	
					7 pH Unit	99.8	99.3	101	
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4357216)									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	89.8	70.0	130	
EG048G: Hexavalent Chromium (Alkaline Digest) (QCLot: 4358654)									
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	84.4	70.0	130	
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4359645)									
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	92.2	70.0	130	
EK040T: Fluoride Total (QCLot: 4358630)									
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	110	75.2	110	
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4357164)									
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	97.1	67.4	136	
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4351190)									
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	100	69.2	116	
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	99.2	67.7	116	
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	96.7	66.6	115	



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
					LCS	Low	High	
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4351190) - continued								
EP074-UT: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4.2 mg/kg	95.5	65.2	112
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	91.6	69.4	111
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	94.7	68.4	110
EP074H: Naphthalene (QCLot: 4351190)								
EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	0.6 mg/kg	83.1	72.3	114
EP074I: Volatile Halogenated Compounds (QCLot: 4351190)								
EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	128	47.0	138
EP074-UT: 1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	104	57.6	125
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	99.6	72.3	115
EP074-UT: trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	105	60.5	122
EP074-UT: cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	99.2	70.3	112
EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	95.3	66.6	115
EP074-UT: 1,1,1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	98.6	64.4	122
EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	98.8	58.4	127
EP074-UT: 1,2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	102	72.9	114
EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	101	64.7	115
EP074-UT: 1,1,2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	99.4	72.6	116
EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	102	60.0	119
EP074-UT: 1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	90.0	71.8	116
EP074-UT: 1,1,1,2,2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	95.6	66.1	116
EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	92.0	39.8	128
EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	96.8	70.3	113
EP074-UT: 1,4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	95.6	62.6	113
EP074-UT: 1,2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	95.9	70.8	110
EP074-UT: 1,2,4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	92.9	48.4	120
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4357163)								
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	88.0	74.5	126
EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	86.5	72.7	126
EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	86.8	73.5	132
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	88.6	72.8	128
EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	2 mg/kg	87.5	73.3	134
EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	2 mg/kg	85.8	72.4	128
EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	84.0	69.4	126
EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/5 8-90-2	0.05	mg/kg	<0.05	4 mg/kg	90.2	71.9	128
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	84.0	54.4	135
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4357163)								



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: 4357163) - continued									
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	88.7	71.5	130	
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	86.9	73.4	129	
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	88.7	74.3	129	
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	84.8	70.9	133	
EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	87.0	71.8	132	
EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	63.2	41.0	156	
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	88.5	65.3	134	
EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	81.2	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	83.1	62.0	128	
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	77.9	34.5	137	
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4357163)									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	86.9	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	87.3	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	88.6	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	89.2	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	88.4	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	88.7	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	89.9	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	89.6	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	90.0	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	91.4	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	91.4	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	90.6	65.1	130	
EP075-EM: Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	91.6	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	91.0	72.9	135	
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	91.1	71.3	134	
EP075I: Organochlorine Pesticides (QCLot: 4357163)									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	87.5	71.0	129	
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	86.6	74.8	126	
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	89.2	75.7	130	
EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	2 mg/kg	87.6	70.8	130	
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	88.3	76.5	134	
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	87.6	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	87.7	76.8	130	
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	87.7	73.6	130	
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	88.7	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	88.6	75.3	131	
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	81.2	69.4	134	



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
EP075I: Organochlorine Pesticides (QCLot: 4357163) - continued									
EP075-EM: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	90.0	71.0	132	
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	88.4	78.0	133	
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	88.1	69.0	143	
EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	2 mg/kg	89.3	55.7	145	
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	90.2	71.4	135	
EP075-EM: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	89.9	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	89.7	77.7	133	
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	91.5	63.6	135	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4351190)									
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	95.8	61.1	119	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4357165)									
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	670 mg/kg	115	74.4	129	
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	2860 mg/kg	116	81.0	123	
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1490 mg/kg	107	81.8	121	
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5020 mg/kg	113	70.0	130	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4351190)									
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	96.8	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: 4357165)									
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1000 mg/kg	113	75.4	132	
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	3770 mg/kg	118	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	250 mg/kg	114	73.3	136	
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5020 mg/kg	117	70.0	130	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4359436)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	95.0	72.0	128	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	102	73.0	123	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	68.1	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	115	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	95.4	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	106	59.0	134	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4359436)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	89.3	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	81.1	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.8	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.1	69.0	133	



Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report				
					Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4359436) - continued									
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.7	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.5	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	79.8	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.0	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	112	69.0	133	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4359436)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.3	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	99.3	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	105	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	103	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	90.8	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.8	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.4	61.0	139	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4359436)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	98.4	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	99.1	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	97.8	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	91.7	70.0	130	
EP231P: PFAS Sums (QCLot: 4359436)									
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	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4359188)									
EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.444 µg/L	99.6	72.0	130	
EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.47 µg/L	85.7	71.0	127	
EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.457 µg/L	79.6	68.0	131	
EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.477 µg/L	91.8	69.0	134	
EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.465 µg/L	93.9	65.0	140	
EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.482 µg/L	90.5	53.0	142	



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	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4362191)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	105	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	95.1	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	99.2	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	100	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	102	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	97.2	53.0	142	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4362196)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	97.2	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	105	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	104	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	109	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	105	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	101	53.0	142	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4359188)									
EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	2.5 µg/L	91.3	73.0	129	
EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.5 µg/L	91.1	72.0	129	
EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.5 µg/L	93.4	72.0	129	
EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.5 µg/L	93.8	72.0	130	
EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.5 µg/L	86.8	71.0	133	
EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.5 µg/L	101	69.0	130	
EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.5 µg/L	95.5	71.0	129	
EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.5 µg/L	97.1	69.0	133	
EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.5 µg/L	95.7	72.0	134	
EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.5 µg/L	102	65.0	144	
EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	1.25 µg/L	101	71.0	132	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4362191)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	99.6	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	94.1	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	105	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	101	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	108	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	101	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	100	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	97.7	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.7	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	107	71.0	132	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4362196)									



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: 4362196) - continued									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	99.2	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	93.6	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	104	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	97.3	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	94.7	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	102	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.5	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	92.2	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	100	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	104	71.0	132	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4359188)									
EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.5 µg/L	93.8	67.0	137	
EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	1.25 µg/L	110	68.0	141	
EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	1.25 µg/L	90.7	70.0	130	
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	1.25 µg/L	78.4	70.0	130	
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	1.25 µg/L	102	70.0	130	
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.5 µg/L	104	65.0	136	
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.5 µg/L	102	61.0	135	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4362191)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	97.2	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	112	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	110	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	102	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	101	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	91.5	61.0	135	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4362196)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	97.8	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	113	68.0	141	



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
					LCS	Low	High	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4362196) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	99.4	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	97.3	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	106	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	94.7	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	104	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4359188)								
EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.469 µg/L	93.9	63.0	143
EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.476 µg/L	102	64.0	140
EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.48 µg/L	98.4	67.0	138
EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.483 µg/L	115	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4362191)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	96.2	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	86.3	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	103	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	99.4	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4362196)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	106	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	106	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	104	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	108	70.0	130
EP231P: PFAS Sums (QCLot: 4359188)								
EP231X-INJ: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X-INJ: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X-INJ: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----
EP231P: PFAS Sums (QCLot: 4362191)								
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: 4362196)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike	Spike Recovery (%)	Acceptable Limits (%)	
					Concentration	LCS	Low	High
EP231P: PFAS Sums (QCLot: 4362196) - continued								
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

Matrix Spike (MS) Report

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

Sub-Matrix: SOIL

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery (%) MS	Acceptable Limits (%) Low	Acceptable Limits (%) High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4357217)							
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EG005T: Arsenic	7440-38-2	50 mg/kg	107	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	94.9	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	104	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	106	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	97.2	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	105	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	95.0	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4357216)							
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EG035T: Mercury	7439-97-6	0.5 mg/kg	77.8	76.0	116
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4358654)							
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	88.6	58.0	114
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	101	58.0	114
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4359645)							
EM2209285-012	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	111	70.0	130
EK040T: Fluoride Total (QCLot: 4358630)							
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EK040T: Fluoride	16984-48-8	400 mg/kg	70.6	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4357164)							
EM2209335-003	SX_OB_20220519_08_00_SS_Duplicate_ALS	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	96.8	59.6	152
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4351190)							
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	69.8	53.7	130
		EP074-UT: Toluene	108-88-3	2 mg/kg	74.4	55.1	124
EP074I: Volatile Halogenated Compounds (QCLot: 4351190)							
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	48.0	38.4	145
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	64.9	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	70.3	55.5	122
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4357163)							



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: 4357163) - continued							
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	98.5	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	99.8	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	90.1	10.0	144
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4357163)							
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EP075-EM: Phenol	108-95-2	3 mg/kg	96.0	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	89.9	34.2	129
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4357163)							
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	96.0	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	101	37.8	152
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4351190)							
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	67.4	42.3	111
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4357165)							
EM2209335-006	SX_IB_20220519_11_57_SS_Primary_ALS	EP071-EM: C10 - C14 Fraction	----	670 mg/kg	111	71.3	126
		EP071-EM: C15 - C28 Fraction	----	2860 mg/kg	111	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1490 mg/kg	103	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	5020 mg/kg	109	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4351190)							
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	66.3	39.9	109
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4357165)							
EM2209335-006	SX_IB_20220519_11_57_SS_Primary_ALS	EP071-EM: >C10 - C16 Fraction	----	1000 mg/kg	109	71.5	130
		EP071-EM: >C16 - C34 Fraction	----	3770 mg/kg	113	76.9	119
		EP071-EM: >C34 - C40 Fraction	----	250 mg/kg	110	65.3	139
		EP071-EM: >C10 - C40 Fraction (sum)	----	5020 mg/kg	112	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4359436)							
EM2209269-023	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	105	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	122	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	95.3	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	118	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	69.8	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	84.2	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4359436)							
EM2209269-023	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	90.7	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	82.1	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	88.5	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	100	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	81.2	69.0	133



Sub-Matrix: **SOIL**

				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: 4359436) - continued							
EM2209269-023	Anonymous	EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	92.0	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	103	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	85.2	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	99.5	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	84.0	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	106	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4359436)							
EM2209269-023	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	97.0	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	93.6	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	104	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	98.1	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	90.9	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	103	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	110	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4359436)							
EM2209269-023	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	99.9	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	99.8	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	105	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	77.1	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4359188)							
EM2209335-005	SX_IB_20220519_08_44_SB_Blank_ALS	EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.444 µg/L	108	72.0	130
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.47 µg/L	85.1	71.0	127
		EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.457 µg/L	89.4	68.0	131
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.477 µg/L	102	69.0	134
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.465 µg/L	100	65.0	140
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.482 µg/L	97.8	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4362191)							
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	100	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	101	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	97.4	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: 4362191) - continued									
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	106	69.0	134		
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	102	65.0	140		
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	99.2	53.0	142		
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4362196)									
EM2209335-015	SX_OB_20220519_07_59_SS_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	104	72.0	130		
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	99.0	71.0	127		
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	93.8	68.0	131		
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	114	69.0	134		
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	69.7	65.0	140		
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	91.6	53.0	142		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4359188)									
EM2209335-005	SX_IB_20220519_08_44_SB_Blank_ALS	EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	2.5 µg/L	100	73.0	129		
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.5 µg/L	101	72.0	129		
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.5 µg/L	109	72.0	129		
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.5 µg/L	103	72.0	130		
		EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.5 µg/L	103	71.0	133		
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.5 µg/L	112	69.0	130		
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.5 µg/L	105	71.0	129		
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.5 µg/L	99.6	69.0	133		
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.5 µg/L	104	72.0	134		
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.5 µg/L	111	65.0	144		
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	1.25 µg/L	119	71.0	132		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4362191)									
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	97.7	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	101	72.0	129		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	106	72.0	130		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	103	71.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	110	69.0	130		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	107	71.0	129		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	99.4	69.0	133		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	99.1	72.0	134		
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	102	65.0	144		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	114	71.0	132		
		EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4362196)							
		EM2209335-015	SX_OB_20220519_07_59_SS_Primary_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	85.4	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3			0.25 µg/L	94.5	72.0	129		
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4			0.25 µg/L	93.8	72.0	129		



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4362196) - continued							
EM2209335-015	SX_OB_20220519_07_59_SS_Primary_ALS	EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	101	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	101	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	106	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	101	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	90.4	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	86.2	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	79.8	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	79.5	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4359188)							
EM2209335-005	SX_IB_20220519_08_44_SB_Blank_ALS	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.5 µg/L	104	67.0	137
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	1.25 µg/L	128	68.0	141
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	1.25 µg/L	103	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	1.25 µg/L	84.5	70.0	130
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	1.25 µg/L	118	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.5 µg/L	100	65.0	136
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.5 µg/L	107	61.0	135
		EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4362191)					
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	104	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	120	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	102	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	114	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	111	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	99.9	61.0	135
		EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4362196)					
EM2209335-015	SX_OB_20220519_07_59_SS_Primary_ALS	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	71.9	68.0	141



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4362196) - continued							
EM2209335-015	SX_OB_20220519_07_59_SS_Primary_ALS	EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	# 64.3	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	83.7	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	76.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	70.5	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	79.3	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4359188)							
EM2209335-005	SX_IB_20220519_08_44_SB_Blank_ALS	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.469 µg/L	97.2	63.0	143
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.476 µg/L	121	64.0	140
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.48 µg/L	114	67.0	138
		EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.483 µg/L	127	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4362191)							
EM2209335-002	SX_OB_20220519_07_59_SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	110	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	99.3	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	118	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	113	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4362196)							
EM2209335-015	SX_OB_20220519_07_59_SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	99.9	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	108	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	95.4	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	84.3	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EM2209335	Page	: 1 of 16
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: DAVID LAWSON	Telephone	: +61-3-8549 9600
Project	: JC0927	Date Samples Received	: 20-May-2022
Site	: 20220520043942-ALS-52	Issue Date	: 27-May-2022
Sampler	: HK - EP Risk, Martha - Agon	No. of samples received	: 24
Order number	: ----	No. of samples analysed	: 24

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: WATER

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231C: Perfluoroalkyl Sulfonamides	EM2209335--015	SX_OB_20220519_07_59_SS	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	64.3 %	70.0-130%	Recovery less than lower data quality objective

Analysis Holding Time Compliance

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

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

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

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

Matrix: SOIL

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

Method 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_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	26-May-2022	26-May-2022	✓	26-May-2022	26-May-2022	✓
Soil Glass Jar - Unpreserved (EA001) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	26-May-2022	27-May-2022	✓	26-May-2022	26-May-2022	✓
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	----	----	----	25-May-2022	02-Jun-2022	✓
Soil Glass Jar - Unpreserved (EA055) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	----	----	----	25-May-2022	03-Jun-2022	✓



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	15-Nov-2022	✓	25-May-2022	15-Nov-2022	✓
Soil Glass Jar - Unpreserved (EG005T) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	25-May-2022	16-Nov-2022	✓	25-May-2022	16-Nov-2022	✓
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	16-Jun-2022	✓	26-May-2022	16-Jun-2022	✓
Soil Glass Jar - Unpreserved (EG035T) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	25-May-2022	17-Jun-2022	✓	26-May-2022	17-Jun-2022	✓
EG048: Hexavalent Chromium (Alkaline Digest)								
Soil Glass Jar - Unpreserved (EG048G) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	26-May-2022	16-Jun-2022	✓	27-May-2022	02-Jun-2022	✓
Soil Glass Jar - Unpreserved (EG048G) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	26-May-2022	17-Jun-2022	✓	27-May-2022	02-Jun-2022	✓
EK026SF: Total CN by Segmented Flow Analyser								
Soil Glass Jar - Unpreserved (EK026SF) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	02-Jun-2022	✓	26-May-2022	08-Jun-2022	✓
Soil Glass Jar - Unpreserved (EK026SF) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	25-May-2022	03-Jun-2022	✓	26-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	
EK040T: Fluoride Total								
Soil Glass Jar - Unpreserved (EK040T) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_07_59_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	16-Jun-2022	✓	27-May-2022	16-Jun-2022	✓
Soil Glass Jar - Unpreserved (EK040T) SX_IB_20220520_00_01_SS_Primary_ALS, SX_OB_20220520_04_06_SS_Primary_ALS		20-May-2022	25-May-2022	17-Jun-2022	✓	27-May-2022	17-Jun-2022	✓
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_07_59_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS, SX_IB_20220519_20_10_SS_Primary_ALS		19-May-2022	25-May-2022	15-Nov-2022	✓	----	----	----
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P) SX_IB_20220520_00_01_SS_Primary_ALS, SX_OB_20220520_04_06_SS_Primary_ALS		20-May-2022	25-May-2022	16-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_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_07_59_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS, SX_IB_20220519_20_10_SS_Primary_ALS		19-May-2022	25-May-2022	15-Nov-2022	✓	----	----	----
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P) SX_IB_20220520_00_01_SS_Primary_ALS, SX_OB_20220520_04_06_SS_Primary_ALS		20-May-2022	25-May-2022	16-Nov-2022	✓	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066-EM) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_07_59_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS, SX_IB_20220519_20_10_SS_Primary_ALS		19-May-2022	25-May-2022	02-Jun-2022	✓	25-May-2022	04-Jul-2022	✓
Soil Glass Jar - Unpreserved (EP066-EM) SX_IB_20220520_00_01_SS_Primary_ALS, SX_OB_20220520_04_06_SS_Primary_ALS		20-May-2022	25-May-2022	03-Jun-2022	✓	25-May-2022	04-Jul-2022	✓



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP074A: Monocyclic Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220519_07_51_SS_Primary_ALS, SX_IB_20220519_08_00_SS_Duplicate_ALS, SX_IB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	21-May-2022	26-May-2022	✓	23-May-2022	26-May-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	21-May-2022	27-May-2022	✓	23-May-2022	27-May-2022	✓
EP074H: Naphthalene								
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220519_07_51_SS_Primary_ALS, SX_IB_20220519_08_00_SS_Duplicate_ALS, SX_IB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	21-May-2022	26-May-2022	✓	23-May-2022	26-May-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	21-May-2022	27-May-2022	✓	23-May-2022	27-May-2022	✓
EP074I: Volatile Halogenated Compounds								
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220519_07_51_SS_Primary_ALS, SX_IB_20220519_08_00_SS_Duplicate_ALS, SX_IB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	21-May-2022	26-May-2022	✓	23-May-2022	26-May-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	21-May-2022	27-May-2022	✓	23-May-2022	27-May-2022	✓
EP075A: Phenolic Compounds (Halogenated)								
Soil Glass Jar - Unpreserved (EP075-EM) SX_IB_20220519_07_51_SS_Primary_ALS, SX_IB_20220519_08_00_SS_Duplicate_ALS, SX_IB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	02-Jun-2022	✓	25-May-2022	04-Jul-2022	✓
Soil Glass Jar - Unpreserved (EP075-EM) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	25-May-2022	03-Jun-2022	✓	25-May-2022	04-Jul-2022	✓



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP075A: Phenolic Compounds (Non-halogenated)								
Soil Glass Jar - Unpreserved (EP075-EM)								
SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	02-Jun-2022	✓	25-May-2022	04-Jul-2022	✓
Soil Glass Jar - Unpreserved (EP075-EM)								
SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	25-May-2022	03-Jun-2022	✓	25-May-2022	04-Jul-2022	✓
EP075B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075-EM)								
SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	02-Jun-2022	✓	25-May-2022	04-Jul-2022	✓
Soil Glass Jar - Unpreserved (EP075-EM)								
SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	25-May-2022	03-Jun-2022	✓	25-May-2022	04-Jul-2022	✓
EP075I: Organochlorine Pesticides								
Soil Glass Jar - Unpreserved (EP075-EM)								
SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	02-Jun-2022	✓	25-May-2022	04-Jul-2022	✓
Soil Glass Jar - Unpreserved (EP075-EM)								
SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	25-May-2022	03-Jun-2022	✓	25-May-2022	04-Jul-2022	✓



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	21-May-2022	26-May-2022	✓	23-May-2022	26-May-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	02-Jun-2022	✓	25-May-2022	04-Jul-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	21-May-2022	27-May-2022	✓	23-May-2022	27-May-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	25-May-2022	03-Jun-2022	✓	25-May-2022	04-Jul-2022	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	21-May-2022	26-May-2022	✓	23-May-2022	26-May-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	02-Jun-2022	✓	25-May-2022	04-Jul-2022	✓
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	21-May-2022	27-May-2022	✓	23-May-2022	27-May-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	25-May-2022	03-Jun-2022	✓	25-May-2022	04-Jul-2022	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	15-Nov-2022	✓	25-May-2022	04-Jul-2022	✓
HDPE Soil Jar (EP231X) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	25-May-2022	16-Nov-2022	✓	25-May-2022	04-Jul-2022	✓



Matrix: **SOIL**

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X) SX_IB_20220519_07_51_SS_Primary_ALS, SX_IB_20220519_08_00_SS_Duplicate_ALS, SX_IB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	15-Nov-2022	✓	25-May-2022	04-Jul-2022	✓
HDPE Soil Jar (EP231X) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	25-May-2022	16-Nov-2022	✓	25-May-2022	04-Jul-2022	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE Soil Jar (EP231X) SX_IB_20220519_07_51_SS_Primary_ALS, SX_IB_20220519_08_00_SS_Duplicate_ALS, SX_IB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	15-Nov-2022	✓	25-May-2022	04-Jul-2022	✓
HDPE Soil Jar (EP231X) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	25-May-2022	16-Nov-2022	✓	25-May-2022	04-Jul-2022	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X) SX_IB_20220519_07_51_SS_Primary_ALS, SX_IB_20220519_08_00_SS_Duplicate_ALS, SX_IB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	15-Nov-2022	✓	25-May-2022	04-Jul-2022	✓
HDPE Soil Jar (EP231X) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	25-May-2022	16-Nov-2022	✓	25-May-2022	04-Jul-2022	✓
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X) SX_IB_20220519_07_51_SS_Primary_ALS, SX_IB_20220519_08_00_SS_Duplicate_ALS, SX_IB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS,	19-May-2022	25-May-2022	15-Nov-2022	✓	25-May-2022	04-Jul-2022	✓
HDPE Soil Jar (EP231X) SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220520_04_06_SS_Primary_ALS	20-May-2022	25-May-2022	16-Nov-2022	✓	25-May-2022	04-Jul-2022	✓

Matrix: **WATER**

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

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



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-INJ) SX_IB_20220519_08_43_SR_Rinsate_ALS,	SX_IB_20220519_08_44_SB_Blank_ALS	19-May-2022	25-May-2022	15-Nov-2022	✓	25-May-2022	15-Nov-2022	✓
HDPE (no PTFE) (EP231X) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS, SX_OB_20220520_04_06_SS_Primary_ALS, SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS, SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS, SX_IB_20220520_00_01_SS_Primary_ALS, SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS, SX_OB_20220520_04_06_SS_Primary_ALS	25-May-2022	26-May-2022	21-Nov-2022	✓	26-May-2022	21-Nov-2022	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X-INJ) SX_IB_20220519_08_43_SR_Rinsate_ALS,	SX_IB_20220519_08_44_SB_Blank_ALS	19-May-2022	25-May-2022	15-Nov-2022	✓	25-May-2022	15-Nov-2022	✓
HDPE (no PTFE) (EP231X) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS, SX_OB_20220520_04_06_SS_Primary_ALS, SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS, SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS, SX_IB_20220520_00_01_SS_Primary_ALS, SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS, SX_OB_20220520_04_06_SS_Primary_ALS	25-May-2022	26-May-2022	21-Nov-2022	✓	26-May-2022	21-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-INJ) SX_IB_20220519_08_43_SR_Rinsate_ALS,	SX_IB_20220519_08_44_SB_Blank_ALS	19-May-2022	25-May-2022	15-Nov-2022	✓	25-May-2022	15-Nov-2022	✓
HDPE (no PTFE) (EP231X) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS, SX_OB_20220520_04_06_SS_Primary_ALS, SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS, SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS, SX_IB_20220520_00_01_SS_Primary_ALS, SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS, SX_OB_20220520_04_06_SS_Primary_ALS	25-May-2022	26-May-2022	21-Nov-2022	✓	26-May-2022	21-Nov-2022	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X-INJ) SX_IB_20220519_08_43_SR_Rinsate_ALS,	SX_IB_20220519_08_44_SB_Blank_ALS	19-May-2022	25-May-2022	15-Nov-2022	✓	25-May-2022	15-Nov-2022	✓
HDPE (no PTFE) (EP231X) SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS, SX_OB_20220520_04_06_SS_Primary_ALS, SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS, SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS, SX_IB_20220520_00_01_SS_Primary_ALS, SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS, SX_OB_20220520_04_06_SS_Primary_ALS	25-May-2022	26-May-2022	21-Nov-2022	✓	26-May-2022	21-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-INJ)								
SX_IB_20220519_08_43_SR_Rinsate_ALS,	SX_IB_20220519_08_44_SB_Blank_ALS	19-May-2022	25-May-2022	15-Nov-2022	✓	25-May-2022	15-Nov-2022	✓
HDPE (no PTFE) (EP231X)								
SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS, SX_OB_20220520_04_06_SS_Primary_ALS, SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS, SX_IB_20220520_00_01_SS_Primary_ALS,	SX_OB_20220519_07_59_SS_Primary_ALS, SX_IB_20220519_11_57_SS_Primary_ALS, SX_IB_20220519_15_58_SS_Triplicate_ALS, SX_IB_20220519_20_06_SS_Triplicate_ALS, SX_IB_20220520_00_01_SS_Primary_ALS, SX_IB_20220519_07_51_SS_Primary_ALS, SX_OB_20220519_08_00_SS_Duplicate_ALS, SX_OB_20220519_15_49_SS_Primary_ALS, SX_IB_20220519_16_07_SS_Primary_ALS, SX_IB_20220519_20_10_SS_Primary_ALS, SX_OB_20220520_04_06_SS_Primary_ALS	25-May-2022	26-May-2022	21-Nov-2022	✓	26-May-2022	21-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	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	20	15.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Deionised Water Leach - Plastic Leaching Vessel	EN60-DIa-P	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard



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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Matrix Spikes (MS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard

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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	22	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	5	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
pH in soil using a 0.01M CaCl 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-INJ	WATER	In house: Direct injection analysis of fresh waters after dilution (1:1) with mobile phase solvent. Analysis by LC-Electrospray-MS-MS, Negative Mode using MRM. Where commercially available, isotopically labelled analogues of the target analytes are used as internal standards for quantification. Where a labelled analogue is not commercially available, the internal standard with similar chemistry and the closest retention time to the target is used for quantification. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers.

Preparation Methods	Method	Matrix	Method Descriptions
NaOH leach for CN in Soils	CN-PR	SOIL	In house: APHA 4500 CN. Samples are extracted by end-over-end tumbling with NaOH.
pH in soil using a 0.01M CaCl 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.
Preparation for PFAS in water.	EP231-PR	WATER	Method presumes direct injection without workup. Preparation includes addition of internal standard and surrogate, and filtration prior to analysis.

CHAIN OF CUSTODY DOCUMENTATION										 Australian Laboratory Services Pty Ltd												
CLIENT: Agon Environmental					SAMPLER: Will - Agon																	
ADDRESS / OFFICE: Melbourne					MOBILE 1: +61 400 826 907 (Craig Trimbur)																	
PROJECT MANAGER (PM): Craig Trimbur					MOBILE 2: +61 490 411 004 (David Lawson)																	
PROJECT ID: JC0927					EMAIL REPORT TO: Labreports.TST@agonenviro.com.au agonenvironmental@esdat.com.au motherhublabresults1@wgtp.com.au																	
SITE: 20220605191621-ALS-8 P.O. NO.:					RESULTS REQUIRED (Date): 5 days QUOTE NO.: ME-150-19 WGTP					EMAIL INVOICE TO: (if different to report) Labreports.TST@agonenviro.com.au agonenvironmental@esdat.com.au												
ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)																						
FOR LABORATORY USE ONLY: CONTAINER TYPE (plastic/glass) Date: Time: No. N/A SAMPLE TEMPERATURE: CONTAINER: Yes No		COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:							Notes:													
SAMPLE INFORMATION (note: S = Soil, W=Water)							CONTAINER INFORMATION															
ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles	Spill Sample Prep	P15 plus Cr	PFAS 28 Extended suite	ASLP PFAS - Extended Suite (Lab to determine pH)	DI Leachate PFAS - Extended Suite											
1	SX_IB_20220605_11_03_SS_Primary_ALS	S	5/06/2022	11:03	Bucket	1	X	X	X	X	X											
2	SX_IB_20220605_11_03_SS_Duplicate_ALS	S	5/06/2022	11:03	Bucket	1	X	X	X	X	X											
3	SX_IB_20220605_11_16_SS_Primary_ALS	S	5/06/2022	11:16	Bucket	1	X	X	X	X	X											
4	SX_IB_20220605_11_18_SS_Duplicate_ALS	S	5/06/2022	11:18	Bucket	1	X	X	X	X	X											
5	SX_OB_20220605_11_30_SS_Triplicate_ALS	S	5/06/2022	11:30	Bucket	1	X	X	X	X	X											
RELINQUISHED BY:							RECEIVED BY:							METHOD OF SHIPMENT								
Name: Emma S			Date: 06/06/22				Name: <i>Monika</i>			Date: 6/6				Con' Note No:								
Of: EP Risk			Time: 09:15				Of: <i>Monika</i>			Time: 6/6 10:30												
Name:			Date:				Name:			Date:				Transport Co:								
Of:			Time:				Of:			Time:												
Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; V = VOA Vial HCl Preserved; VS = VOA Vial Sulphuric Preserved; SG = Sulphuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulphuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bad for Acid Sulphate Soils; B = Unpreserved Bag.																						

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AUSTRALIAN LABORATORY SERVICES P/L

Environmental Division
Melbourne
Work Order Reference
EM2210646



CERTIFICATE OF ANALYSIS

Work Order	: EM2210646	Page	: 1 of 15
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: DAVID LAWSON	Contact	: Josh Alexander
Address	: D1.1 63-85 TURNER STREET PORT MELBOURNE 3207	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +61-3-8549 9600
Project	: JC0927	Date Samples Received	: 06-Jun-2022 11:30
Order number	: ----	Date Analysis Commenced	: 07-Jun-2022
C-O-C number	: 20220605191621-ALS-8	Issue Date	: 14-Jun-2022 11:45
Sampler	: Will - Agon		
Site	: 20220605191621-ALS-8		
Quote number	: EN/150/19 -WGTP -Bulk Sample Quote		
No. of samples received	: 10		
No. of samples analysed	: 10		



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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

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



General Comments

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

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

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

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

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

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

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

- EG048G: EM2210646 #1-4 result for hexavalent chromium has been confirmed by re-preparation and re-analysis.
- EP231X: Poor matrix spike recovery for sample EM2210580-002 due to sample matrix interference.
- EP231X: Poor matrix spike recovery for sample EM2210580-018 due to sample matrix interference.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP074-UT: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074-WF: Where reported, Sum of trichlorobenzenes is the sum of the reported concentrations of 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene, and 1,3,5-Trichlorobenzene at or above the LOR.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.
- EN60: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.
- EN60-DI: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_IB_20220605_11_03_SS_Primary_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS	SX_IB_20220605_11_16_SS_Primary_ALS	SX_IB_20220605_11_18_SS_Duplicate_ALS	SX_IB_20220605_11_30_SS_Triplicate_ALS
Sampling date / time				05-Jun-2022 11:03	05-Jun-2022 11:03	05-Jun-2022 11:16	05-Jun-2022 11:18	05-Jun-2022 11:30
Compound	CAS Number	LOR	Unit	EM2210646-001	EM2210646-002	EM2210646-003	EM2210646-004	EM2210646-005
				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_20220605_11_03_SS_Primary_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS	SX_IB_20220605_11_16_SS_Primary_ALS	SX_IB_20220605_11_18_SS_Duplicate_ALS	SX_OB_20220605_11_30_SS_Triplicate_ALS
Sampling date / time				05-Jun-2022 11:03	05-Jun-2022 11:03	05-Jun-2022 11:16	05-Jun-2022 11:18	05-Jun-2022 11:30
Compound	CAS Number	LOR	Unit	EM2210646-001	EM2210646-002	EM2210646-003	EM2210646-004	EM2210646-005
				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	%	95.4	87.8	92.9	97.9	88.3
13C8-PFOA	----	0.02	%	94.8	92.6	94.7	93.3	93.1



Analytical Results

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

Sample ID

				SX_IB_20220605_11_03_SS_Primary_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS	SX_IB_20220605_11_16_SS_Primary_ALS	SX_IB_20220605_11_18_SS_Duplicate_ALS	SX_OB_20220605_11_30_SS_Triplicate_ALS
Sampling date / time				05-Jun-2022 11:03	05-Jun-2022 11:03	05-Jun-2022 11:16	05-Jun-2022 11:18	05-Jun-2022 11:30
Compound	CAS Number	LOR	Unit	EM2210646-006	EM2210646-007	EM2210646-008	EM2210646-009	EM2210646-010
				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_20220605_11_03_SS_Primary_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS	SX_IB_20220605_11_16_SS_Primary_ALS	SX_IB_20220605_11_18_SS_Duplicate_ALS	SX_OB_20220605_11_30_SS_Triplicate_ALS
Sampling date / time				05-Jun-2022 11:03	05-Jun-2022 11:03	05-Jun-2022 11:16	05-Jun-2022 11:18	05-Jun-2022 11:30
Compound	CAS Number	LOR	Unit	EM2210646-006	EM2210646-007	EM2210646-008	EM2210646-009	EM2210646-010
				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	%	99.4	90.7	90.6	95.6	100
13C8-PFOA	----	0.02	%	98.9	89.9	91.5	84.7	95.6



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220605_11_03_SS_Primary_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS	SX_IB_20220605_11_16_SS_Primary_ALS	SX_IB_20220605_11_18_SS_Duplicate_ALS	SX_OB_20220605_11_30_SS_Triplicate_ALS
Sampling date / time				05-Jun-2022 11:03	05-Jun-2022 11:03	05-Jun-2022 11:16	05-Jun-2022 11:18	05-Jun-2022 11:30
Compound	CAS Number	LOR	Unit	EM2210646-001	EM2210646-002	EM2210646-003	EM2210646-004	EM2210646-005
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	8.0	7.8	7.7	7.7	7.8
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	24.9	21.9	27.5	28.5	23.6
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	16	19	27	23	24
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	5	mg/kg	121	130	114	114	93
Copper	7440-50-8	5	mg/kg	62	58	58	56	56
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	187	173	178	163	132
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Silver	7440-22-4	2	mg/kg	<2	<2	<2	<2	<2
Tin	7440-31-5	10	mg/kg	<10	<10	<10	<10	<10
Zinc	7440-66-6	5	mg/kg	84	80	87	77	82
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	1.5	1.3	1.3	1.1	<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	370	330	340	380	280
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Initial pH	----	0.1	pH Unit	8.8	8.9	8.9	9.1	9.0
After HCl pH	----	0.1	pH Unit	1.5	1.4	1.3	1.3	1.3
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	5.0	5.0
Final pH	----	0.1	pH Unit	5.1	5.1	5.1	5.1	5.1
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220605_11_03_SS_Primary_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS	SX_IB_20220605_11_16_SS_Primary_ALS	SX_IB_20220605_11_18_SS_Duplicate_ALS	SX_IB_20220605_11_30_SS_Triplicate_ALS
Sampling date / time				05-Jun-2022 11:03	05-Jun-2022 11:03	05-Jun-2022 11:16	05-Jun-2022 11:18	05-Jun-2022 11:30
Compound	CAS Number	LOR	Unit	EM2210646-001	EM2210646-002	EM2210646-003	EM2210646-004	EM2210646-005
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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)								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220605_11_03_SS_Primary_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS	SX_IB_20220605_11_16_SS_Primary_ALS	SX_IB_20220605_11_18_SS_Duplicate_ALS	SX_IB_20220605_11_30_SS_Triplicate_ALS
Sampling date / time				05-Jun-2022 11:03	05-Jun-2022 11:03	05-Jun-2022 11:16	05-Jun-2022 11:18	05-Jun-2022 11:30
Compound	CAS Number	LOR	Unit	EM2210646-001	EM2210646-002	EM2210646-003	EM2210646-004	EM2210646-005
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Halogenated) - Continued								
2-Chlorophenol	95-57-8	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
2,4-Dichlorophenol	120-83-2	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
2,6-Dichlorophenol	87-65-0	0.50	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,4,5-Trichlorophenol	95-95-4	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220605_11_03_SS_Primary_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS	SX_IB_20220605_11_16_SS_Primary_ALS	SX_IB_20220605_11_18_SS_Duplicate_ALS	SX_IB_20220605_11_30_SS_Triplicate_ALS
Sampling date / time				05-Jun-2022 11:03	05-Jun-2022 11:03	05-Jun-2022 11:16	05-Jun-2022 11:18	05-Jun-2022 11:30
Compound	CAS Number	LOR	Unit	EM2210646-001	EM2210646-002	EM2210646-003	EM2210646-004	EM2210646-005
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220605_11_03_SS_Primary_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS	SX_IB_20220605_11_16_SS_Primary_ALS	SX_IB_20220605_11_18_SS_Duplicate_ALS	SX_OB_20220605_11_30_SS_Triplicate_ALS
Sampling date / time				05-Jun-2022 11:03	05-Jun-2022 11:03	05-Jun-2022 11:16	05-Jun-2022 11:18	05-Jun-2022 11:30
Compound	CAS Number	LOR	Unit	EM2210646-001	EM2210646-002	EM2210646-003	EM2210646-004	EM2210646-005
				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	<0.30	<0.30	<0.30
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220605_11_03_SS_Primary_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS	SX_IB_20220605_11_16_SS_Primary_ALS	SX_IB_20220605_11_18_SS_Duplicate_ALS	SX_OB_20220605_11_30_SS_Triplicate_ALS
Sampling date / time				05-Jun-2022 11:03	05-Jun-2022 11:03	05-Jun-2022 11:16	05-Jun-2022 11:18	05-Jun-2022 11:30
Compound	CAS Number	LOR	Unit	EM2210646-001	EM2210646-002	EM2210646-003	EM2210646-004	EM2210646-005
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids								
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_20220605_11_03_SS_Primary_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS	SX_IB_20220605_11_16_SS_Primary_ALS	SX_IB_20220605_11_18_SS_Duplicate_ALS	SX_IB_20220605_11_30_SS_Triplicate_ALS
Sampling date / time				05-Jun-2022 11:03	05-Jun-2022 11:03	05-Jun-2022 11:16	05-Jun-2022 11:18	05-Jun-2022 11:30
Compound	CAS Number	LOR	Unit	EM2210646-001	EM2210646-002	EM2210646-003	EM2210646-004	EM2210646-005
				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	%	104	97.6	92.4	93.0	90.1
EP074S: VOC Surrogates (Ultra-Trace)								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	85.9	93.4	80.2	101	96.0
Toluene-D8	2037-26-5	0.1	%	88.6	93.3	86.8	103	97.4
4-Bromofluorobenzene	460-00-4	0.1	%	94.4	100	92.7	106	102
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	99.8	97.5	93.4	87.8	94.2
2-Chlorophenol-D4	93951-73-6	0.025	%	114	102	107	98.8	97.8
2,4,6-Tribromophenol	118-79-6	0.025	%	95.5	84.0	80.0	80.9	76.4
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								
Nitrobenzene-D5	4165-60-0	0.025	%	96.0	88.5	85.2	85.3	83.5
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	91.5	82.6	80.9	77.7	79.3
2-Fluorobiphenyl	321-60-8	0.025	%	104	94.2	89.7	90.9	88.5
Anthracene-d10	1719-06-8	0.025	%	105	95.8	92.8	93.9	92.0
4-Terphenyl-d14	1718-51-0	0.025	%	94.4	84.3	81.5	81.8	80.5
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	103	85.9	91.8	88.0	91.2
13C8-PFOA	----	0.0002	%	94.8	106	121	100	106



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_IB_20220605_11_03_SS_Primary_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS	SX_IB_20220605_11_16_SS_Primary_ALS	SX_IB_20220605_11_18_SS_Duplicate_ALS	SX_OB_20220605_11_30_SS_Triplicate_ALS
Sampling date / time				05-Jun-2022 11:03	05-Jun-2022 11:03	05-Jun-2022 11:16	05-Jun-2022 11:18	05-Jun-2022 11:30
Compound	CAS Number	LOR	Unit	EM2210646-006	EM2210646-007	EM2210646-008	EM2210646-009	EM2210646-010
				Result	Result	Result	Result	Result
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Final pH	----	0.1	pH Unit	8.6	10.1	9.9	9.8	9.6



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

QUALITY CONTROL REPORT

Work Order	: EM2210646	Page	: 1 of 27
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: DAVID LAWSON	Contact	: Josh Alexander
Address	: D1.1 63-85 TURNER STREET PORT MELBOURNE 3207	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +61-3-8549 9600
Project	: JC0927	Date Samples Received	: 06-Jun-2022
Order number	: ----	Date Analysis Commenced	: 07-Jun-2022
C-O-C number	: 20220605191621-ALS-8	Issue Date	: 14-Jun-2022
Sampler	: Will - Agon		
Site	: 20220605191621-ALS-8		
Quote number	: EN/150/19 -WGTP -Bulk Sample Quote		
No. of samples received	: 10		
No. of samples analysed	: 10		



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

This Quality Control Report contains the following information:

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

Signatories

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

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



General Comments

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

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4384789)									
EM2210673-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<5	4	35.3	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	36	34	8.2	0% - 50%
		EG005T: Copper	7440-50-8	5	mg/kg	985	983	0.2	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	64	58	9.9	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	11600	10400	10.1	0% - 20%
EM2210646-003	SX_IB_20220605_11_16_S S_Primary_ALS	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	114	107	6.2	0% - 20%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	178	169	5.7	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	27	27	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	58	54	7.6	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
EM2210673-002	Anonymous	EG005T: Zinc	7440-66-6	5	mg/kg	87	80	8.2	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	55	51	6.2	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	17	19	10.3	No Limit
		EG005T: Silver	7440-22-4	2	mg/kg	5	5	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	26	24	8.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	90	85	5.6	0% - 50%

EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4385418)



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 (%)	
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4385418) - continued										
EM2210606-028	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.8	7.9	0.0	0% - 20%	
EM2210638-034	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	5.9	6.0	0.0	0% - 20%	
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4384422)										
EM2210521-001	Anonymous	EA055: Moisture Content	----	0.1	%	29.3	27.7	5.7	0% - 20%	
EM2210580-002	Anonymous	EA055: Moisture Content	----	0.1	%	37.6	34.1	9.7	0% - 20%	
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4384423)										
EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_ALS	EA055: Moisture Content	----	0.1	%	21.9	22.2	1.2	0% - 20%	
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4384787)										
EM2209584-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.1	0.0	No Limit	
EM2210580-008	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: 4384790)										
EM2210646-003	SX_IB_20220605_11_16_S S_Primary_ALS	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
EM2210673-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 4384841)										
EM2210576-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
EM2210580-012	Anonymous	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: 4389950)										
EM2210580-009	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<5	<5	0.0	No Limit	
EM2210313-004	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit	
EK040T: Fluoride Total (QC Lot: 4384830)										
EM2210576-001	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	260	260	0.0	No Limit	
EM2210580-012	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	450	580	23.6	No Limit	
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4384748)										
EM2210580-001	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_ALS	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit	
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4382618)										
EM2210646-001	SX_IB_20220605_11_03_S S_Primary_ALS	EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit	
		EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074-UT: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
			106-42-3							
		EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
	95-47-6	EP074-UT: ortho-Xylene		0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
EP074H: Naphthalene (QC Lot: 4382618)										



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 (%)		
EP074H: Naphthalene (QC Lot: 4382618) - continued											
EM2210646-001	SX_IB_20220605_11_03_S S_Primary_ALS	EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit		
EP074I: Volatile Halogenated Compounds (QC Lot: 4382618)											
EM2210646-001	SX_IB_20220605_11_03_S S_Primary_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.50	<0.50	0.0	No Limit		
		EP074-UT: cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.50	<0.50	0.0	No Limit		
		EP074-UT: 1,1,1-Trichloroethane	71-55-6	0.01	mg/kg	<0.50	<0.50	0.0	No Limit		
		EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.50	<0.50	0.0	No Limit		
		EP074-UT: 1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.50	<0.50	0.0	No Limit		
		EP074-UT: 1,2,4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.50	<0.50	0.0	No Limit		
		EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.50	<0.50	0.0	No Limit		
		EP074-UT: trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.50	<0.50	0.0	No Limit		
		EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.50	<0.50	0.0	No Limit		
		EP074-UT: 1,2-Dichloroethane	107-06-2	0.02	mg/kg	<0.50	<0.50	0.0	No Limit		
		EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.50	<0.50	0.0	No Limit		
		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		
EM2210580-001	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50	0.0	No Limit		
		EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.50	<0.50	0.0	No Limit		
		EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.50	<0.50	0.0	No Limit		
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<1.00	<1.00	0.0	No Limit		
		EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit		
		EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit		
		EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	0.0	No Limit		
		EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit		
		EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_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



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: 4384750) - continued									
EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_ALS	EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-9 0-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit
EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4384750)									
EM2210580-001	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
EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_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
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4384750)	Anonymous	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4384750) - continued									
EM2210580-001	Anonymous	EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	<1.0	0.0	No Limit
EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_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: 4384750)									
EM2210580-001	Anonymous	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.05	<0.05	0.0	No Limit



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: 4384750) - continued									
EM2210580-001	Anonymous	EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_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		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4382618)									
EM2210646-001	SX_IB_20220605_11_03_S S_Primary_ALS	EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<20	<20	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4384749)									
EM2210580-001	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
EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_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: 4382618)									
EM2210646-001	SX_IB_20220605_11_03_S S_Primary_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<20	<20	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)		
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4382618) - continued											
EM2210646-001	SX_IB_20220605_11_03_S S_Primary_ALS	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: 4384749)											
EM2210580-001	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		
EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_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: 4385511)											
EM2210264-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
EM2210638-031	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	0.0003	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	0.0038	0.0037	0.0	0% - 50%		
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4385511)											
EM2210264-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit		
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit		
		EM2210638-031	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	0.0003	0.0	No Limit
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9			0.0002	mg/kg	0.0002	<0.0002	0.0	No Limit		



Sub-Matrix: SOIL

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4385511) - continued									
EM2210638-031	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0011	0.0010	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
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4385511)									
EM2210264-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EM2210638-031	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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4385511)									
EM2210264-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



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: 4385511) - continued									
EM2210264-001	Anonymous	EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2210638-031	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
EP231P: PFAS Sums (QC Lot: 4385511)									
EM2210264-001	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2210638-031	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0056	0.0052	7.4	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0041	0.0039	5.0	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0056	0.0052	7.4	0% - 20%
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: 4391397)									
EM2210580-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_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: 4392570)									
EM2210580-013	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4392570) - continued									
EM2210580-013	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
EM2210646-006	SX_IB_20220605_11_03_S S_Primary_ALS	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4391397)									
EM2210580-001	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
EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4392570)									
EM2210580-013	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



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: 4392570) - continued									
EM2210580-013	Anonymous	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
EM2210646-006	SX_IB_20220605_11_03_S S_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit		
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4391397)									
EM2210580-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_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



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: 4391397) - continued									
EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_ALS	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: 4392570)									
EM2210580-013	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
EM2210646-006	SX_IB_20220605_11_03_S S_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4391397)									
EM2210580-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4391397) - continued									
EM2210580-001	Anonymous	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_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: 4392570)									
EM2210580-013	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
EM2210646-006	SX_IB_20220605_11_03_S S_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4391397)									
EM2210580-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit
EM2210646-002	SX_IB_20220605_11_03_S S_Duplicate_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: 4392570)									
EM2210580-013	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit

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 Work Order : EM2210646
 Client : AGON ENVIRONMENTAL PTY LTD
 Project : JC0927



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231P: PFAS Sums (QC Lot: 4392570) - continued									
EM2210580-013	Anonymous	EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2210646-006	SX_IB_20220605_11_03_S S_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763- 23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit



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

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

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4384789)									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	99.7	70.0	130	
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	57.3	50.0	130	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	97.7	70.0	130	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	91.7	70.0	130	
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	89.7	70.0	130	
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	88.2	70.0	130	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	93.6	70.0	130	
EG005T: Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----	
EG005T: Silver	7440-22-4	2	mg/kg	<2	2.9 mg/kg	77.6	70.0	130	
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	71.2	70.0	130	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	73.7	70.0	130	
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4390611)									
EN60-DIa-P: Final pH	----	0.1	pH Unit	6.8	----	----	----	----	
EA001: pH in soil using 0.01M CaCl extract (QCLot: 4385418)									
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	101	98.8	101	
				----	7 pH Unit	100	99.3	101	
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4384787)									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	89.1	70.0	130	
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4384790)									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	74.3	70.0	130	
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4384841)									
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	82.5	70.0	130	
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4389950)									
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	81.3	70.0	130	
EK040T: Fluoride Total (QCLot: 4384830)									
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	95.1	75.2	110	
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4384748)									
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	96.4	67.4	136	
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4382618)									
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	85.6	69.2	116	
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	89.2	67.7	116	
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	90.3	66.6	115	



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4382618) - continued									
EP074-UT: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4.2 mg/kg	91.2	65.2	112	
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	88.7	69.4	111	
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	87.8	68.4	110	
EP074H: Naphthalene (QCLot: 4382618)									
EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	0.6 mg/kg	93.5	72.3	114	
EP074I: Volatile Halogenated Compounds (QCLot: 4382618)									
EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	94.9	47.0	138	
EP074-UT: 1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	96.7	57.6	125	
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	86.4	72.3	115	
EP074-UT: trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	90.0	60.5	122	
EP074-UT: cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	89.4	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	94.6	64.4	122	
EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	97.4	58.4	127	
EP074-UT: 1,2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	81.0	72.9	114	
EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	83.2	64.7	115	
EP074-UT: 1,1,2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	82.6	72.6	116	
EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	88.8	60.0	119	
EP074-UT: 1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	94.2	71.8	116	
EP074-UT: 1,1,2,2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	81.8	66.1	116	
EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	112	39.8	128	
EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	87.2	70.3	113	
EP074-UT: 1,4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	92.8	62.6	113	
EP074-UT: 1,2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	86.0	70.8	110	
EP074-UT: 1,2,4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	104	48.4	120	
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4384750)									
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	101	74.5	126	
EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	93.6	72.7	126	
EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	95.2	73.5	132	
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	92.7	72.8	128	
EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	2 mg/kg	92.9	73.3	134	
EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	2 mg/kg	92.6	72.4	128	
EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	90.7	69.4	126	
EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/5 8-90-2	0.05	mg/kg	<0.05	4 mg/kg	94.6	71.9	128	
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	84.1	54.4	135	
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4384750)									



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: 4384750) - continued									
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	104	73.4	129	
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	95.7	74.3	129	
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	94.4	70.9	133	
EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	94.8	71.8	132	
EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	75.3	41.0	156	
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	105	65.3	134	
EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	79.6	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	85.7	62.0	128	
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	71.9	34.5	137	
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4384750)									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	95.1	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	96.8	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	98.8	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	97.9	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	98.5	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	97.7	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	102	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	101	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	106	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	103	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	104	65.1	130	
EP075-EM: Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	102	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	101	72.9	135	
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	101	71.3	134	
EP075I: Organochlorine Pesticides (QCLot: 4384750)									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	96.0	71.0	129	
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	95.7	74.8	126	
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	96.3	75.7	130	
EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	2 mg/kg	97.6	70.8	130	
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	99.0	76.5	134	
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	96.4	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	96.1	76.8	130	
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	96.8	73.6	130	
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	96.1	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	96.0	75.3	131	
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	98.4	69.4	134	



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
EP075I: Organochlorine Pesticides (QCLot: 4384750) - continued									
EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	97.6	71.0	132	
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	98.8	78.0	133	
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	102	69.0	143	
EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	2 mg/kg	104	55.7	145	
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	100	71.4	135	
EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	101	74.8	134	
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	102	70.2	135	
EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	100	77.7	133	
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	104	63.6	135	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4382618)									
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	83.8	61.1	119	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4384749)									
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	670 mg/kg	89.6	74.4	129	
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	2860 mg/kg	97.6	81.0	123	
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1490 mg/kg	91.3	81.8	121	
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5020 mg/kg	94.6	70.0	130	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4382618)									
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	86.0	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: 4384749)									
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1000 mg/kg	94.3	75.4	132	
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	3770 mg/kg	101	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	250 mg/kg	89.5	73.3	136	
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5020 mg/kg	99.0	70.0	130	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4385511)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	99.7	72.0	128	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	87.4	73.0	123	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	67.6	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	90.0	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	86.8	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	78.0	59.0	134	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4385511)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	90.6	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.1	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.0	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.1	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	82.2	69.0	133	



Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report				
					Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4385511) - continued									
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.4	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	83.1	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.0	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	82.4	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	93.7	69.0	133	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4385511)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	83.8	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	90.6	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	88.2	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	85.1	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	103	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.4	61.0	139	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4385511)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	95.6	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	84.4	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	110	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	107	70.0	130	
EP231P: PFAS Sums (QCLot: 4385511)									
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	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4391397)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	95.7	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	97.8	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	91.3	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	95.3	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	88.4	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	89.4	53.0	142	



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	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4392570)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	113	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	104	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	108	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	102	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	102	53.0	142	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4391397)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	89.2	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	83.6	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	91.6	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	95.9	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	88.5	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	90.3	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	96.6	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	91.5	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	99.9	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	87.3	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	97.0	71.0	132	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4392570)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	107	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	101	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	111	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	102	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	106	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	102	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.6	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	110	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	96.1	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	116	71.0	132	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4391397)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	93.6	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	84.7	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	91.0	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	93.1	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	93.1	70.0	130	



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
					LCS	Low	High	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4391397) - continued								
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	100	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	83.5	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4392570)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	108	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	126	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	111	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	108	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	121	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	107	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4391397)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	96.1	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	108	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	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	76.0	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4392570)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	109	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	116	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	109	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	75.9	70.0	130
EP231P: PFAS Sums (QCLot: 4391397)								
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: 4392570)								
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	----	----	----	----



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	SpikeRecovery(%) MS	Acceptable Limits (%)	
				Low	High		
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4384789)							
EM2210646-004	SX_IB_20220605_11_18_SS_Duplicate_ALS	EG005T: Arsenic	7440-38-2	50 mg/kg	84.7	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	90.8	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	94.8	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	99.0	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	89.2	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	104	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	85.4	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4384787)							
EM2210264-001	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	95.6	76.0	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4384790)							
EM2210646-004	SX_IB_20220605_11_18_SS_Duplicate_ALS	EG035T: Mercury	7439-97-6	0.5 mg/kg	93.8	76.0	116
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4384841)							
EM2210580-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	91.6	58.0	114
EM2210580-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	95.1	58.0	114
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4389950)							
EM2210313-005	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	95.6	70.0	130
EK040T: Fluoride Total (QCLot: 4384830)							
EM2210580-001	Anonymous	EK040T: Fluoride	16984-48-8	400 mg/kg	77.8	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4384748)							
EM2210580-002	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	104	59.6	152
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4382618)							
EM2210646-002	SX_IB_20220605_11_03_SS_Duplicate_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	113	53.7	130
		EP074-UT: Toluene	108-88-3	2 mg/kg	114	55.1	124
EP074I: Volatile Halogenated Compounds (QCLot: 4382618)							
EM2210646-002	SX_IB_20220605_11_03_SS_Duplicate_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	119	38.4	145
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	110	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	106	55.5	122
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4384750)							
EM2210580-007	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	104	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	93.5	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	70.3	10.0	144
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4384750)							
EM2210580-007	Anonymous	EP075-EM: Phenol	108-95-2	3 mg/kg	103	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	96.5	34.2	129



Sub-Matrix: SOIL

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4384750)							
EM2210580-007	Anonymous	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	95.0	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	97.2	37.8	152
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4382618)							
EM2210646-002	SX_IB_20220605_11_03_SS_Duplicate_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	84.9	42.3	111
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4384749)							
EM2210580-006	Anonymous	EP071-EM: C10 - C14 Fraction	----	670 mg/kg	90.1	71.3	126
		EP071-EM: C15 - C28 Fraction	----	2860 mg/kg	98.0	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1490 mg/kg	91.8	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	5020 mg/kg	95.0	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4382618)							
EM2210646-002	SX_IB_20220605_11_03_SS_Duplicate_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	78.5	39.9	109
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4384749)							
EM2210580-006	Anonymous	EP071-EM: >C10 - C16 Fraction	----	1000 mg/kg	94.5	71.5	130
		EP071-EM: >C16 - C34 Fraction	----	3770 mg/kg	101	76.9	119
		EP071-EM: >C34 - C40 Fraction	----	250 mg/kg	90.3	65.3	139
		EP071-EM: >C10 - C40 Fraction (sum)	----	5020 mg/kg	99.6	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4385511)							
EM2210607-018	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	113	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	98.5	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	96.0	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	98.9	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	# 47.9	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	81.5	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4385511)							
EM2210607-018	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	93.4	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	95.8	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	84.2	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	101	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	93.3	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	114	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	91.8	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	85.2	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	95.2	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	88.0	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	116	69.0	133
		EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4385511)					
EM2210607-018	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	95.8	67.0	137



Sub-Matrix: **SOIL**

				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: 4385511) - continued							
EM2210607-018	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	127	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	86.6	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	96.6	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	94.3	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	101	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	101	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4385511)							
EM2210607-018	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	101	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	106	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	108	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	91.2	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4391397)							
EM2210580-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	92.5	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	81.2	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	80.8	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	94.8	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	85.1	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	83.5	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4392570)							
EM2210580-018	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	112	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	99.2	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	106	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	121	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	125	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	98.2	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4391397)							
EM2210580-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	85.0	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	79.6	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	86.5	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	90.6	72.0	130



Sub-Matrix: WATER

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	SpikeRecovery(%) MS	Acceptable Limits (%)	
				Low	High		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4391397) - continued							
EM2210580-002	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	80.4	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	89.6	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	87.4	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	85.2	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	92.7	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	76.2	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	89.4	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4392570)							
EM2210580-018	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	99.2	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	101	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	104	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	112	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	100	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	111	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	95.7	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	86.4	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	92.1	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	# 60.3	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	# 61.0	71.0	132		
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4391397)							
EM2210580-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	80.3	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	93.8	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	93.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	85.6	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	82.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	99.7	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	85.1	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4392570)							
EM2210580-018	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	105	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	# 67.0	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	# 67.1	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	74.6	70.0	130



Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4392570) - continued							
EM2210580-018	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	72.6	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	68.9	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	# 52.0	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4391397)							
EM2210580-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	96.8	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	103	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	101	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	# 61.8	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4392570)							
EM2210580-018	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	111	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	110	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	122	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	# 66.3	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EM2210646	Page	: 1 of 12
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: DAVID LAWSON	Telephone	: +61-3-8549 9600
Project	: JC0927	Date Samples Received	: 06-Jun-2022
Site	: 20220605191621-ALS-8	Issue Date	: 14-Jun-2022
Sampler	: Will - Agon	No. of samples received	: 10
Order number	: ----	No. of samples analysed	: 10

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							
EP231A: Perfluoroalkyl Sulfonic Acids	EM2210607--018	Anonymous	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	47.9 %	68.0-136%	Recovery less than lower data quality objective

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231B: Perfluoroalkyl Carboxylic Acids	EM2210580--018	Anonymous	Perfluorotridecanoic acid (PFTrDA)	72629-94-8	60.3 %	65.0-144%	Recovery less than lower data quality objective
EP231B: Perfluoroalkyl Carboxylic Acids	EM2210580--018	Anonymous	Perfluorotetradecanoic acid (PFTeDA)	376-06-7	61.0 %	71.0-132%	Recovery less than lower data quality objective
EP231C: Perfluoroalkyl Sulfonamides	EM2210580--018	Anonymous	N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	67.0 %	68.0-141%	Recovery less than lower data quality objective
EP231C: Perfluoroalkyl Sulfonamides	EM2210580--018	Anonymous	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	67.1 %	70.0-130%	Recovery less than lower data quality objective
EP231C: Perfluoroalkyl Sulfonamides	EM2210580--018	Anonymous	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	52.0 %	61.0-135%	Recovery less than lower data quality objective
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2210580--002	Anonymous	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	61.8 %	70.0-130%	Recovery less than lower data quality objective
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2210580--018	Anonymous	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	66.3 %	70.0-130%	Recovery less than lower data quality objective

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

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



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_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	08-Jun-2022	12-Jun-2022	✓	08-Jun-2022	08-Jun-2022	✓
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	----	----	----	07-Jun-2022	19-Jun-2022	✓
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	08-Jun-2022	02-Dec-2022	✓	09-Jun-2022	02-Dec-2022	✓
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	08-Jun-2022	03-Jul-2022	✓	09-Jun-2022	03-Jul-2022	✓
EG048: Hexavalent Chromium (Alkaline Digest)								
Soil Glass Jar - Unpreserved (EG048G) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	08-Jun-2022	03-Jul-2022	✓	08-Jun-2022	15-Jun-2022	✓
EK026SF: Total CN by Segmented Flow Analyser								
Soil Glass Jar - Unpreserved (EK026SF) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	09-Jun-2022	19-Jun-2022	✓	10-Jun-2022	23-Jun-2022	✓
EK040T: Fluoride Total								
Soil Glass Jar - Unpreserved (EK040T) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	08-Jun-2022	03-Jul-2022	✓	09-Jun-2022	03-Jul-2022	✓
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	09-Jun-2022	02-Dec-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-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P)								
SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	09-Jun-2022	02-Dec-2022	✓	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066-EM)								
SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	07-Jun-2022	19-Jun-2022	✓	08-Jun-2022	17-Jul-2022	✓
EP074A: Monocyclic Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	07-Jun-2022	12-Jun-2022	✓	07-Jun-2022	12-Jun-2022	✓
EP074H: Naphthalene								
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	07-Jun-2022	12-Jun-2022	✓	07-Jun-2022	12-Jun-2022	✓
EP074I: Volatile Halogenated Compounds								
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	07-Jun-2022	12-Jun-2022	✓	07-Jun-2022	12-Jun-2022	✓
EP075A: Phenolic Compounds (Halogenated)								
Soil Glass Jar - Unpreserved (EP075-EM)								
SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	07-Jun-2022	19-Jun-2022	✓	08-Jun-2022	17-Jul-2022	✓
EP075A: Phenolic Compounds (Non-halogenated)								
Soil Glass Jar - Unpreserved (EP075-EM)								
SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	07-Jun-2022	19-Jun-2022	✓	08-Jun-2022	17-Jul-2022	✓
EP075B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075-EM)								
SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	07-Jun-2022	19-Jun-2022	✓	08-Jun-2022	17-Jul-2022	✓



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP075I: Organochlorine Pesticides								
Soil Glass Jar - Unpreserved (EP075-EM) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	07-Jun-2022	19-Jun-2022	✓	08-Jun-2022	17-Jul-2022	✓
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	07-Jun-2022	12-Jun-2022	✓	07-Jun-2022	12-Jun-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	07-Jun-2022	19-Jun-2022	✓	08-Jun-2022	17-Jul-2022	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP074-UT) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	07-Jun-2022	12-Jun-2022	✓	07-Jun-2022	12-Jun-2022	✓
Soil Glass Jar - Unpreserved (EP071-EM) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	07-Jun-2022	19-Jun-2022	✓	08-Jun-2022	17-Jul-2022	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	08-Jun-2022	02-Dec-2022	✓	08-Jun-2022	18-Jul-2022	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	08-Jun-2022	02-Dec-2022	✓	08-Jun-2022	18-Jul-2022	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE Soil Jar (EP231X) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	08-Jun-2022	02-Dec-2022	✓	08-Jun-2022	18-Jul-2022	✓



Matrix: **SOIL**

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	08-Jun-2022	02-Dec-2022	✓	08-Jun-2022	18-Jul-2022	✓
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	05-Jun-2022	08-Jun-2022	02-Dec-2022	✓	08-Jun-2022	18-Jul-2022	✓

Matrix: **WATER**

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS, SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS, SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	09-Jun-2022	10-Jun-2022	06-Dec-2022	✓	10-Jun-2022	06-Dec-2022	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS, SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS, SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	09-Jun-2022	10-Jun-2022	06-Dec-2022	✓	10-Jun-2022	06-Dec-2022	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS, SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS, SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	09-Jun-2022	10-Jun-2022	06-Dec-2022	✓	10-Jun-2022	06-Dec-2022	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X) SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS, SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS,	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS, SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	09-Jun-2022	10-Jun-2022	06-Dec-2022	✓	10-Jun-2022	06-Dec-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_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS, SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS, SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	SX_IB_20220605_11_03_SS_Duplicate_ALS, SX_IB_20220605_11_18_SS_Duplicate_ALS, SX_IB_20220605_11_03_SS_Primary_ALS, SX_IB_20220605_11_16_SS_Primary_ALS, SX_OB_20220605_11_30_SS_Triplicate_ALS	09-Jun-2022	10-Jun-2022	06-Dec-2022	✓	10-Jun-2022	06-Dec-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	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	3	23	13.04	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	14	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	2	14	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	30	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	12	25.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	2	14	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	5	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	30	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Deionised Water Leach - Plastic Leaching Vessel	EN60-DIa-P	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	30	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Reular	Actual	Expected	Evaluation	
Analytical Methods							
Matrix Spikes (MS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	30	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Reular	Actual	Expected	Evaluation	
Analytical Methods							
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	28	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	28	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	28	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	28	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 soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.

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.
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.

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