

TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	C04.0120220407133105_04	This report is attached as part of a WCR form referencing WGT-302-000-WKN-CJH-105-SWI-0001_01
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1. Motherhub Summary

Source TBM/Bin at Pivot	1	Source Geological Domain	3
Approx. Source Tunnel Chainage From	274	Approx. Source Tunnel Chainage To	280
Approx. Rings From	116	Approx. Rings To	118
Foaming Agent	TamSoil 287AC	Water Source	Potable (City West Water)
For BSF Holding Bay No:	C04.01	Start of Filling From (Time / date)	24/03/2022
Tonnes Put in Holding Bay No:	4621.25	Finish of Filling (Time / Date)	26/03/2022
Classified Volume (LCM)	2888.2813	Spoil Classification Decision	NPIW Containment
Sampling Ratio (samples per LCM)	1 : 206.31	Approx. Bank Cubic Meters (BCM)	1147.27

2. Agon Spoil Classification Decision

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

3. Agon Spoil Classification Assessment

3.1 Applicable Samples

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

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

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Table 3.1 - Applicable Sample ID's

Table 3.1 - 1 Applicable Sample ID's

Applicable Spoil Sample ID's		
SX_OB_20220324_16_24_SS_Primary_EUF	SX_OB_20220324_20_13_SS_Primary_ALS	SX_OB_20220325_08_18_SS_Primary_EUF
SX_OB_20220324_16_25_SS_Duplicate_EUF	SX_OB_20220325_00_08_SS_Primary_ALS	SX_OB_20220325_08_25_SS_Primary_ALS
SX_OB_20220324_16_27_SS_Triplicate_ALS	SX_OB_20220325_00_16_SS_Primary_EUF	SX_OB_20220325_08_27_SS_Duplicate_ALS
SX_OB_20220324_16_35_SS_Primary_ALS	SX_OB_20220325_04_07_SS_Primary_EUF	SX_OB_20220325_08_30_SS_Triplicate_EUF
SX_OB_20220324_20_06_SS_Primary_EUF	SX_OB_20220325_04_18_SS_Primary_ALS	
Total Sample Numbers	14	Ratio Acceptable
Primary Sample Numbers	10	Yes
Classified Volume (LCM)	2888.2813 m ³	
Volume: Sample Number Ratio (Samples per LCM)	1 : 206.31	

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3.2 Data Quality Compliance with SAQP

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

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

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

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3.3 Selection of the Spoil Sample Testing Regime

Table 3.3 - 1 Selection of the Spoil Sample Testing Regime

	(State Yes or No in each Row)
<p>A. Is testing all spoil samples taken required for spoil in this Holding Bay, because prior to this Holding Bay, less than 10 Holding Bays of spoil have been tested from this Domain</p> <p style="text-align: center;">If the answer is Yes, go to E. If the answer is No, go to B.</p>	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 style="text-align: center;">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:	
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	14*	10	1 : 206.31	14	19	34.5	40.07	62	20	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Chromium (Hexavalent)	mg/kg	1	14*	10	1 : 206.31	6	0.9	0.81	NA	1.6	1	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Nickel	mg/kg	5	14*	10	1 : 206.31	14	164	196.1	208.5	250	60	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)
Fluoride	mg/kg	100	14*	10	1 : 206.31	8	<100	368.8	NA	540	450	NPIW-Containment - considered to be naturally occurring chemical, see comment 1 (Section 4)

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

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

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

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

PFAS Test Results											
Chemical	Unit	LOR	No. of samples	No. of primary samples	No > LOR	Min	Mean	95% UCL on Mean	Max	Upper Limiting Criteria for NPIW Containment	Spoil Category for PFAS
Total PFAS Concentrations											
Total PFOS	ug/kg	5	14*	10	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFOA	ug/kg	5	14*	10	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
Total PFHxS	ug/kg	5	14*	10	0	N/A	N/A	N/A	<5	N/A	NPIW-Containment
ASLP (pH= 5) PFAS Concentrations											
PFOA	ug/L	0.01	14*	10	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS+PFHxS	ug/L	0.01	14*	10	0	N/A	N/A	N/A	<0.01	7	NPIW-Containment
ASLP (pH= 7) PFAS Concentrations											
PFOA	ug/L	0.01	14*	10	0	N/A	N/A	N/A	<0.01	56	NPIW-Containment
PFOS+PFHxS	ug/L	0.01	14*	10	0	N/A	N/A	N/A	<0.01	7	NPIW-Containment

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

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3.5 Waste Classification for Spoil Not Suitable for Containment Cell

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

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

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

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

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

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

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

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

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Table 3.5 - 3 PFAS Parameter Concentrations and Waste Classifications

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

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4. Comments and Limitations

Comments and Limitations	
1.	<p>Naturally Occurring Chemicals listed in IWRG 621.1 that are within the Background range despite being reported at concentrations that would otherwise categorise the material as PIW:</p> <ol style="list-style-type: none"> 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</i> section 6.2 <i>Arsenic enrichment in the residual soil of the upper Older Volcanics (Tvo1)</i> found that while the soil of the upper Older Volcanics sub-unit contains arsenic, the arsenic is not characteristic of the wider sub unit (i.e the rock) or the lower sub-unit (soil or rock). The concentration of arsenic therefore appears to be related to the chemical and biological weather of the unit over time. This is further supported by: <ol style="list-style-type: none"> 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</i> section 6.3 <i>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 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 Tvo2 soil) indicating that the nickel is likely associated with geochemical enrichment rather than added contamination. iv. Enriched nickel concentrations also corresponded with enriched copper (Tvo2 soil and rock) and zinc (all units) indicating that the nickel is likely associated with geochemical enrichment rather than added contamination.

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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 not considered to be anthropogenic sources of CrVI
- 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.*
- *There were limited exceedances of CrVI in the groundwater, which suggested no evidence of an anthropogenic source or Potential pathway from the surface*

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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 this data set shows:

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

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

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

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

- i. Newer Volcanics Group – Maximum 820 mg/kg
- ii. Older Volcanics – Maximum 600 mg/kg
- iii. Sub-Basaltic Alluvium – Maximum 240 mg/kg

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	<p>In addition, the 95% UCLs calculated for Newer Volcanics Group and Older Volcanics, found to be 322.7 mg/kg and 225.1 mg/kg, were found to be below the EPA IWRG621 Fill Material Upper Limits and are therefore not considered to alter the classification of the ground to be tunnelled.</p> <p>A review of the Agon data for spoil reported in this data set shows:</p> <ul style="list-style-type: none"> • A similar ratio of test results > LOR compared to the overall data set; • If a ½ LOR is substituted for results reported as <LOR (of 100mg/kg), then like the AJJV 95% UCL, the calculation is less than the PIW criteria. <p>The results also show that there are no synthetic compounds reported above the laboratory LOR, another indication that anthropogenic contamination is not present.</p>
2.	Test result outcomes can lead to two classification possibilities, however the classification decision follows the preference of the waste management hierarchy.
3.	Spoil is not from a “Zone of Exception” therefore sampling ratio of Primary Samples only to LCM has not been applied for spoil categorisation as per the SAQP revision 5.
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

	Arsenic	Cadmium	Copper	Chromium (III-VI)	Chromium (hexavalent)	Lead
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	0.4	5	2	0.5	5
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
EPA Victoria IWRG621 Category C Leached Upper Limits						
EPA Victoria IWRG621 Category C Upper Limits	500	100	5,000		500	1,500
EPA Victoria IWRG621 Fill Upper Limits	20	3	100		1	300

Location Code	Field ID	Sample Code	Date	Lab Report Number	Lab Name	Sample Type	Parent Sample						
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	24/03/2022	874462	MGT	Normal		31	<0.4	70	140	1.0	5.1
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720	24/03/2022	874462	MGT	Normal							
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728	24/03/2022	874462	MGT	Normal							
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	24/03/2022	874462	MGT	Field_D	M22-Ma53712	29	<0.4	61	130	<1	<5
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724	24/03/2022	874462	MGT	Field_D	M22-Ma53720						
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732	24/03/2022	874462	MGT	Field_D	M22-Ma53728						
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	24/03/2022	EM2205361	ALSE-Melbourne	Interlab_D	M22-Ma53712	19	<1	52	102	1.6	<5
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015	24/03/2022	EM2205361	ALSE-Melbourne	Interlab_D	M22-Ma53728						
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	24/03/2022	EM2205361	ALSE-Melbourne	Normal		32	<1	59	104	1.2	<5
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014	24/03/2022	EM2205361	ALSE-Melbourne	Normal							
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	24/03/2022	874462	MGT	Normal		62	<0.4	85	140	<1	6.0
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725	24/03/2022	874462	MGT	Normal							
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733	24/03/2022	874462	MGT	Normal							
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	24/03/2022	EM2205361	ALSE-Melbourne	Normal		36	<1	61	101	1.5	<5
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016	24/03/2022	EM2205361	ALSE-Melbourne	Normal							
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	25/03/2022	EM2205361	ALSE-Melbourne	Normal		38	<1	66	103	<1.0	<5
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017	25/03/2022	EM2205361	ALSE-Melbourne	Normal							
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	25/03/2022	874462	MGT	Normal		46	<0.4	61	140	<1	<5
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726	25/03/2022	874462	MGT	Normal							
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734	25/03/2022	874462	MGT	Normal							
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	25/03/2022	874462	MGT	Normal		32	<0.4	59	120	<1	<5
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727	25/03/2022	874462	MGT	Normal							
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735	25/03/2022	874462	MGT	Normal							
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	25/03/2022	EM2205361	ALSE-Melbourne	Normal		28	<1	56	107	<1.0	<5
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018	25/03/2022	EM2205361	ALSE-Melbourne	Normal							
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma53369	25/03/2022	874677	MGT	Normal		34	<0.4	69	130	<1	<5
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371	25/03/2022	874677	MGT	Normal							
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373	25/03/2022	874677	MGT	Normal							
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	25/03/2022	EM2205462	ALSE-Melbourne	Normal		30	<1	54	102	0.9	<5
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005	25/03/2022	EM2205462	ALSE-Melbourne	Normal							
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	25/03/2022	EM2205462	ALSE-Melbourne	Field_D	EM2205462001	33	<1	56	114	1.2	<5
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006	25/03/2022	EM2205462	ALSE-Melbourne	Field_D	EM2205462005						
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370	25/03/2022	874677	MGT	Interlab_D	EM2205462001	33	<0.4	64	130	<1	<5
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372	25/03/2022	874677	MGT	Interlab_D	EM2205462001						
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374	25/03/2022	874677	MGT	Interlab_D	EM2205462005						

	Metals															
	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	PAHs (Vic EPA List)	Benzol(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benz(a)pyrene TEQ calc (Zero)	Benz(a)pyrene TEQ (LOR)	Benz(a)pyrene TEQ calc (Half)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	2	2	2	2	5	5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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	300	4,000	12,000	200	720		140,000	400								
EPA Victoria IWRG621 Category C Leached Upper Limits																
EPA Victoria IWRG621 Category C Upper Limits	75	1,000	3,000	50	180	500	35,000	100								
EPA Victoria IWRG621 Fill Upper Limits	1	40	60	10	10	50	200	20								

Location Code	Field ID	Sample Code	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	PAHs (Vic EPA List)	Benzol(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benz(a)pyrene TEQ calc (Zero)	Benz(a)pyrene TEQ (LOR)	Benz(a)pyrene TEQ calc (Half)
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	<0.1	<5	250	<2	<2	<10	120			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720																
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	<0.1	<5	210	<2	<2	<10	120			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732																
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	<0.1	<5	164	<5	<2	<10	78	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015																
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	<0.1	<5	180	<5	<2	<10	96	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014																
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	<0.1	<5	240	<2	<2	<10	150			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725																
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733																
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	<0.1	<5	190	<5	<2	<10	102	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016																
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	<0.1	<5	189	<5	<2	<10	91	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017																
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	<0.1	<5	180	<2	<2	<10	130			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726																
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734																
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	<0.1	<5	190	<2	<2	<10	110			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727																
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735																
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	<0.1	<5	170	<5	<2	<10	86	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018																
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55369	<0.1	<5	220	<2	<2	<10	120			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371																
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373																
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	<0.1	<2	175	<5	<2	<5	101	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005																
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	<0.1	<2	178	<5	<2	<5	94	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370	<0.1	<5	210	<2	<2	<10	120			<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374																

	PAH													BT		
	Benzo(a) pyrene	Benzo(b+f)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	Benzene	Ethylbenzene	Toluene
	mg/kg	mg/kg	mg/kg	mg/kg	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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold																
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold																
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold																
EPA PFAS Classification - Tunnel Zone - No option for disposal threshold																
EPA Victoria IWRG621 Category B Leached Upper Limits																
EPA Victoria IWRG621 Category B Upper Limits	20												400	16		
EPA Victoria IWRG621 Category C Leached Upper Limits																
EPA Victoria IWRG621 Category C Upper Limits	5												100	4		
EPA Victoria IWRG621 Fill Upper Limits	1												20	1		

Location Code	Field ID	Sample Code	Benzo(a) pyrene	Benzo(b+f)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	Benzene	Ethylbenzene	Toluene
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	<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	<0.1	<0.1
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720																
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	<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	<0.1	<0.1
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732																
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015																
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014																
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	<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	<0.1	<0.1
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725																
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733																
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016																
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017																
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	<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	<0.1	<0.1
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726																
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734																
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	<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	<0.1	<0.1
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727																
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735																
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018																
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma53669	<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	<0.1	<0.1
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371																
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373																
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005																
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370	<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	<0.1	<0.1
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374																

EX	TRH										TPH					Aldrin
	Xylyene (o)	Xylyene (m & p)	Xylyene Total	C6-Cl0	C6-Cl0 (F1 minus BTEX)	Cl0-Cl6	Cl0-Cl6 (F2 minus Naphthalene)	Cl6-C14	C14-C40	Cl0-C40 (Sum of total)	C6-C9	Cl0-Cl4	Cl5-C28	C29-C36	+Cl0-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	
EQL	0.1	0.2	0.3	10	10	50	50	100	100	50	10	20	50	50	50	0.03
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											2,600				40,000	
EPA Victoria IWRG621 Category C Leached Upper Limits																
EPA Victoria IWRG621 Category C Upper Limits											650				10,000	
EPA Victoria IWRG621 Fill Upper Limits											100				1,000	

Location Code	Field ID	Sample Code	Xylyene (o)	Xylyene (m & p)	Xylyene Total	C6-Cl0	C6-Cl0 (F1 minus BTEX)	Cl0-Cl6	Cl0-Cl6 (F2 minus Naphthalene)	Cl6-C14	C14-C40	Cl0-C40 (Sum of total)	C6-C9	Cl0-Cl4	Cl5-C28	C29-C36	+Cl0-C36 (Sum of total)	Aldrin
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720																
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732																
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015																
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014																
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725																
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733																
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016																
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017																
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726																
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734																
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727																
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735																
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50	<0.05
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018																
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55369	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371																
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373																
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	<0.5	<0.5	<0.5	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50	<0.03
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005																
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	<0.5	<0.5	<0.5	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50	<0.03
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.05
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374																

	Organochlorine Pesticides															
	Dieldrin	Aldrin + Dieldrin	DDD	DDT	4,4-DDE	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endrin	Endrin ketone	Endrin aldehyde	Endosulfan sulphate	Chlordane	Chlordane (cis)	Chlordane (trans)	Hexachlorobenzene
	mg/kg	mg/kg	mg/kg	mg/kg	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	0.03	0.03	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.05	0.03	0.03	0.03	0.03	0.03	0.03
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		4.8				50								16		
EPA Victoria IWRG621 Category C Leached Upper Limits																
EPA Victoria IWRG621 Category C Upper Limits		1.2				50								4		
EPA Victoria IWRG621 Fill Upper Limits																

Location Code	Field ID	Sample Code	Dieldrin	Aldrin + Dieldrin	DDD	DDT	4,4-DDE	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endrin	Endrin ketone	Endrin aldehyde	Endosulfan sulphate	Chlordane	Chlordane (cis)	Chlordane (trans)	Hexachlorobenzene
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720																
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732																
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015																
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014																
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725																
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733																
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016																
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017																
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726																
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734																
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727																
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735																
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03	<0.05
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018																
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma53669	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma5371																
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma5373																
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.03		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005																
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.03		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma5370	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1			<0.05
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma5372																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma5374																

	Heptachlor	Heptachlor epoxide	p-BHC	p-BHC	p-BHC	g-BHC (Lindane)	Methoxychlor	Toxaphene	Organochlorine pesticides EPAVIC	Other organochlorine pesticides EPAVIC	p-Chlorophenol	p,p'-Dichlorophenol	p,p',5-Trichlorophenol	p,p',6-Trichlorophenol	p,p'-Dichlorophenol	p-Chloro-3-methylphenol
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.5	0.03	0.03	0.03	0.03	0.05	0.05	0.03	0.03
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	4.8									50						
EPA Victoria IWRG621 Category C Leached Upper Limits																
EPA Victoria IWRG621 Category C Upper Limits	1.2									10						
EPA Victoria IWRG621 Fill Upper Limits									1							

Location Code	Field ID	Sample Code																
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	<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	<0.5	<1
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720																
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	<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	<0.5	<1
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732																
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.03	<0.50	<0.50	<1.00	<1.00	<0.50	<1.00
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015																
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.03	<0.50	<0.50	<1.00	<1.00	<0.50	<1.00
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014																
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	<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	<0.5	<1
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725																
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733																
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.03	<0.50	<0.50	<1.00	<1.00	<0.50	<1.00
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016																
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.03	<0.50	<0.50	<1.00	<1.00	<0.50	<1.00
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017																
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	<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	<0.5	<1
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726																
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734																
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	<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	<0.5	<1
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727																
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735																
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.03	<0.50	<0.50	<1.00	<1.00	<0.50	<1.00
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018																
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma53669	<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	<0.5	<1
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371																
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373																
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.03	<0.03
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005																
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.03	<0.03
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370	<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	<0.5	<1
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374																

	Phenols															
	Pentachlorophenol	2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4,6-Dinitro-2-methylphenol	Tetrachlorophenols	2,3,5,6-Tetrachlorophenol	Cresol Total	4,6-Dinitro-o-cyclohexyl phenol	Phenols (halogenated) EPAVIC	Phenols (non-halogenated) EPAVIC	2,4-Dimethylphenol	2-Methylphenol	2-Nitrophenol	2,4-Dinitrophenol	3&4-Methylphenol (m&p-cresol)	4-Nitrophenol	Dinoseb
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	0.05	5	10	0.03	0.5	5	0.03	1	0.5	0.2	1	5	0.4	5	5
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								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	Sample Code															
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	<1	<5	<10		<0.5	<20		<0.5	<0.2	<1	<5	<0.4	<5	<20	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720															
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728															
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	<1	<5	<10		<0.5	<20		<0.5	<0.2	<1	<5	<0.4	<5	<20	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724															
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732															
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	<1.0	<0.05	<5		<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015															
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	<1.0	<0.05	<5		<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014															
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	<1	<5	<10		<0.5	<20		<0.5	<0.2	<1	<5	<0.4	<5	<20	
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725															
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733															
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	<1.0	<0.05	<5		<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016															
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	<1.0	<0.05	<5		<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017															
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	<1	<5	<10		<0.5	<20		<0.5	<0.2	<1	<5	<0.4	<5	<20	
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726															
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734															
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	<1	<5	<10		<0.5	<20		<0.5	<0.2	<1	<5	<0.4	<5	<20	
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727															
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735															
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	<1.0	<0.05	<5		<0.03	<20	<1.00	<20	<1	<1	<1	<5	<1	<5	<20
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018															
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55369	<1	<5	<10		<0.5	<20		<0.5	<0.2	<1	<5	<0.4	<5	<20	
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371															
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373															
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	<0.2	<0.05	<5		<0.03	<5	<0.03	<1	<1	<1	<1	<5	<1	<5	<5
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005															
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	<0.2	<0.05	<5		<0.03	<5	<0.03	<1	<1	<1	<1	<5	<1	<5	<5
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006															
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370	<1	<5	<10		<0.5	<20		<0.5	<0.2	<1	<5	<0.4	<5	<20	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372															
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374															

	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)		8:2 Fluorotelomer sulfonic acid (8:2 FTS)		6:2 Fluorotelomer sulfonic acid (6:2 FTS)		4:2 Fluorotelomer sulfonic acid (4:2 FTS)		N-Ethyl perfluorooctane
	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L
EQL	0.5	1	20	0.00001	0.0005	0.00001	0.0005	0.00005	0.0005	0.00001	0.0005	0.00005
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold												
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold												
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold												
EPA PFAS Classification - Tunnel Zone - No option for disposal threshold												
EPA Victoria IWRG621 Category B Leached Upper Limits												
EPA Victoria IWRG621 Category B Upper Limits												
EPA Victoria IWRG621 Category C Leached Upper Limits												
EPA Victoria IWRG621 Category C Upper Limits												
EPA Victoria IWRG621 Fill Upper Limits												

Location Code	Field ID	Sample Code	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	N-Ethyl perfluorooctane
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	<0.5	<1	<20		<0.005		<0.01	<0.005
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720				<0.00001	<0.00001	<0.00005	<0.00001	<0.00005
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728				<0.00001	<0.00001	<0.00005	<0.00001	<0.00005
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	<0.5	<1	<20		<0.005		<0.01	<0.005
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724				<0.00001	<0.00001	<0.00005	<0.00001	<0.00005
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732				<0.00001	<0.00001	<0.00005	<0.00001	<0.00005
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	<1			<0.00005	<0.0050	<0.00005	<0.0100	<0.00005
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	<1			<0.00005	<0.0050	<0.00005	<0.0100	<0.00005
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	<0.5	<1	<20		<0.005		<0.01	<0.005
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725				<0.00001	<0.00001	<0.00005	<0.00001	<0.00005
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733				<0.00001	<0.00001	<0.00005	<0.00001	<0.00005
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	<1			<0.00005	<0.0050	<0.00005	<0.0100	<0.00005
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	<1			<0.00005	<0.0050	<0.00005	<0.0100	<0.00005
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	<0.5	<1	<20		<0.005		<0.01	<0.005
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726				<0.00001	<0.00001	<0.00005	<0.00001	<0.00005
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734				<0.00001	<0.00001	<0.00005	<0.00001	<0.00005
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	<0.5	<1	<20		<0.005		<0.01	<0.005
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727				<0.00001	<0.00001	<0.00005	<0.00001	<0.00005
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735				<0.00001	<0.00001	<0.00005	<0.00001	<0.00005
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	<1			<0.00005	<0.0050	<0.00005	<0.0100	<0.00005
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55369	<0.5	<1	<20		<0.005		<0.01	<0.005
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371				<0.00001	<0.00001	<0.00005	<0.00001	<0.00005
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373				<0.00001	<0.00001	<0.00005	<0.00001	<0.00005
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	<1			<0.00005	<0.0005	<0.00005	<0.00005	<0.00005
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	<1			<0.00005	<0.0005	<0.00005	<0.00005	<0.00005
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370	<0.5	<1	<20		<0.005		<0.01	<0.005
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372				<0.00001	<0.00001	<0.00005	<0.00001	<0.00005
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374				<0.00001	<0.00001	<0.00005	<0.00001	<0.00005

EQL	sulfonamide (NEFOSA)	N-ethyl-perfluorooctanesulfonamide acetic acid (NEtFOAAA)	N-ethylperfluorooctanesulfonamideethanol (NEtFOSE)	N-Methyl perfluorooctane sulfonamide (NMtFOSA)	N-methylperfluorooctane sulfonamideacetic acid (NMtFOAAA)	N-Methylperfluorooctanesulfonamideethanol (NMtFOSE)	Perfluorobutanoic acid (PFBA)
	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/L
EQL	0.0005	0.00002	0.0002	0.00005	0.0005	0.00005	0.0005
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold							
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold							
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold							
EPA PFAS Classification - Tunnel Zone - No option for disposal threshold							
EPA Victoria IWRG621 Category B Leached Upper Limits							
EPA Victoria IWRG621 Category B Upper Limits							
EPA Victoria IWRG621 Category C Leached Upper Limits							
EPA Victoria IWRG621 Category C Upper Limits							
EPA Victoria IWRG621 Fill Upper Limits							

Location Code	Field ID	Sample Code	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	<0.005		<0.01		<0.0005		<0.005		<0.01	<0.005
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	<0.005		<0.01		<0.005		<0.005		<0.01	<0.005
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.0100	<0.00005	<0.0050
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015		<0.00005		<0.00005		<0.00005		<0.00005		<0.0001
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.0100	<0.00005	<0.0050
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014		<0.00005		<0.00005		<0.00005		<0.00005		<0.0001
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	<0.005		<0.01		<0.005		<0.005		<0.01	<0.005
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.0100	<0.00005	<0.0050
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016		<0.00005		<0.00005		<0.00005		<0.00005		<0.0001
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.0100	<0.00005	<0.0050
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017		<0.00005		<0.00005		<0.00005		<0.00005		<0.0001
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	<0.005		<0.01		<0.005		<0.005		<0.01	<0.005
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	<0.005		<0.01		<0.005		<0.005		<0.01	<0.005
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.0100	<0.00005	<0.0050
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018		<0.00005		<0.00005		<0.00005		<0.00005		<0.0001
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma53669	<0.005		<0.01		<0.005		<0.005		<0.01	<0.005
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma5371		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma5373		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	<0.0005	<0.00002	<0.0002	<0.00005	<0.0005	<0.00005	<0.0005	<0.0002	<0.0002	<0.0005
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005		<0.00002		<0.00005		<0.00005		<0.00002		<0.0001
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	<0.0005	<0.00002	<0.0002	<0.00005	<0.0005	<0.00005	<0.0005	<0.0002	<0.0002	<0.0005
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006		<0.00002		<0.00005		<0.00005		<0.00002		<0.0001
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma53370	<0.005		<0.01		<0.005		<0.005		<0.01	<0.005
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma5372		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma5374		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005

	Perfluorobutane sulfonic acid (PFBS)		Perfluorodecanoic acid (PFDA)		Perfluorododecanoic acid (PFDoDA)		Perfluorodecane sulfonic acid (PFDS)		Perfluorohexanoic acid (PFHpA)	
	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L
EQL	0.001	0.00001	0.0002	0.00001	0.0002	0.00001	0.0002	0.00001	0.0002	0.00001
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold										
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold										
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold										
EPA PFAS Classification - Tunnel Zone - No option for disposal threshold										
EPA Victoria IWRG621 Category B Leached Upper Limits										
EPA Victoria IWRG621 Category B Upper Limits										
EPA Victoria IWRG621 Category C Leached Upper Limits										
EPA Victoria IWRG621 Category C Upper Limits										
EPA Victoria IWRG621 Fill Upper Limits										

Location Code	Field ID	Sample Code	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55369	<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	<0.001	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	<0.001	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370	<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001

	PFOS/PFOA										
	Perfluorohexane sulfonic acid (PFHxS)		Perfluorohexanoic acid (PFHxA)		Perfluorononanoic acid (PFNA)		Perfluorononanesulfonic acid (PFNS)(trace)		Perfluorooctanoic acid (PFOA)		
	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg
EQL	0.0002	0.00001	0.0002	0.00001	0.0002	0.00001	0.0002	0.00001	0.0005	0.00001	0.0002
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold											0
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold											0.00056
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold											0.0056
EPA PFAS Classification - Tunnel Zone - No option for disposal threshold											0.056
EPA Victoria IWRG621 Category B Leached Upper Limits											
EPA Victoria IWRG621 Category B Upper Limits											
EPA Victoria IWRG621 Category C Leached Upper Limits											
EPA Victoria IWRG621 Category C Upper Limits											
EPA Victoria IWRG621 Fill Upper Limits											

Location Code	Field ID	Sample Code	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	<0.005		<0.005		<0.00001	<0.005	<0.00001	<0.005	<0.00001	<0.005	<0.00001
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	<0.005		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002	
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002	
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	<0.005		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002	
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002	
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	<0.005		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	<0.005		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002	
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55369	<0.005		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002	
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370	<0.005		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	

	Perfluorooctane sulfonamide (PFOSA)		Perfluoropentanoic acid (PFPeA)		Perfluoropentane sulfonic acid (PFPeS)		Perfluoropropanesulfonic acid (PFPrS)		Perfluorotetradecanoic acid (PFTeDA)		Perfluorotridecanoic acid (PFTriDA)
	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L
EQL	0.00002	0.0002	0.00001	0.0002	0.00001	0.0002	0.00001	0.005	0.00001	0.0005	0.00001
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold											
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold											
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold											
EPA PFAS Classification - Tunnel Zone - No option for disposal threshold											
EPA Victoria IWRG621 Category B Leached Upper Limits											
EPA Victoria IWRG621 Category B Upper Limits											
EPA Victoria IWRG621 Category C Leached Upper Limits											
EPA Victoria IWRG621 Category C Upper Limits											
EPA Victoria IWRG621 Fill Upper Limits											

Location Code	Field ID	Sample Code											
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712		<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720	<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728	<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716		<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724	<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732	<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	<0.00005	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050		<0.00005	<0.0050	<0.00002	<0.00002
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015	<0.00005		<0.00002		<0.00002			<0.00005		<0.00002	<0.00002
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	<0.00005	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050		<0.00005	<0.0050	<0.00002	<0.00002
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014	<0.00005		<0.00002		<0.00002			<0.00005		<0.00002	<0.00002
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717		<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725	<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733	<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	<0.00005	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050		<0.00005	<0.0050	<0.00002	<0.00002
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016	<0.00005		<0.00002		<0.00002			<0.00005		<0.00002	<0.00002
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	<0.00005	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050		<0.00005	<0.0050	<0.00002	<0.00002
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017	<0.00005		<0.00002		<0.00002			<0.00005		<0.00002	<0.00002
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718		<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726	<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734	<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719		<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727	<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735	<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	<0.00005	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050		<0.00005	<0.0050	<0.00002	<0.00002
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018	<0.00005		<0.00002		<0.00002			<0.00005		<0.00002	<0.00002
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma53669		<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371	<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373	<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002		<0.00005	<0.0005	<0.00002	<0.00002
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005	<0.00002		<0.00002		<0.00002			<0.00005		<0.00002	<0.00002
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002		<0.00005	<0.0005	<0.00002	<0.00002
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006	<0.00002		<0.00002		<0.00002			<0.00005		<0.00002	<0.00002
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370		<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372	<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374	<0.00005		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001

	Perfluoroundecanoic acid (PFUnDA)		Perfluorooctanesulfonic acid (PFOS)		Perfluorohexanesulfonic acid (PFHxS)		Sum of PFHxS and PFOS		Sum of US EPA PFAS (PFOS + PFOA)*		Sum of enHealth PFAS
	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/L
EQL	0.0002	0.00001	0.0002	0.00001	0.0002	0.00001	0.0002	0.00001	0.0002	0.00001	0.00001
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold								0			
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold								0.00007			
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold								0.0007			
EPA PFAS Classification - Tunnel Zone - No option for disposal threshold								0.007			
EPA Victoria IWRG621 Category B Leached Upper Limits											
EPA Victoria IWRG621 Category B Upper Limits											
EPA Victoria IWRG621 Category C Leached Upper Limits											
EPA Victoria IWRG621 Category C Upper Limits											
EPA Victoria IWRG621 Fill Upper Limits											

Location Code	Field ID	Sample Code	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	<0.0050		<0.00002		<0.00001	<0.0050	<0.00001	<0.0050		
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015		<0.00002		<0.00001		<0.00001		<0.00001		
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	<0.0050		<0.00002		<0.00001	<0.0050	<0.00001	<0.0050		
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014		<0.00002		<0.00001		<0.00001		<0.00001		
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	<0.0050		<0.00002		<0.00001	<0.0050	<0.00001	<0.0050		
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016		<0.00002		<0.00001		<0.00001		<0.00001		
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	<0.0050		<0.00002		<0.00001	<0.0050	<0.00001	<0.0050		
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017		<0.00002		<0.00001		<0.00001		<0.00001		
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	<0.0050		<0.00002		<0.00001	<0.0050	<0.00001	<0.0050		
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018		<0.00002		<0.00001		<0.00001		<0.00001		
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55369	<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	<0.0002		<0.00002		<0.00001	<0.0002	<0.00001	<0.0002		
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005		<0.00002		<0.00001		<0.00001		<0.00001		
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	<0.0002		<0.00002		<0.00001	<0.0002	<0.00001	<0.0002		
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006		<0.00002		<0.00001		<0.00001		<0.00001		
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370	<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001

	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	Sum of PFAS	Sum of PFAS	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	1,1,1,2-tetrachloroethane	Bromodichloromethane	1,1,1-trichloroethane	Chloroform	1,1,2,2-tetrachloroethane		
EQL	0.005	0.00001	0.0002	0.5	0.01	0.5	0.02	0.5	0.5	0.5	0.01	0.5	0.01	0.02	0.02	
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold																
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold																
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold																
EPA PFAS Classification - Tunnel Zone - No option for disposal threshold																
EPA Victoria IWRG621 Category B Leached Upper Limits																
EPA Victoria IWRG621 Category B Upper Limits																
EPA Victoria IWRG621 Category C Leached Upper Limits																
EPA Victoria IWRG621 Category C Upper Limits																
EPA Victoria IWRG621 Fill Upper Limits																

Location Code	Field ID	Sample Code	<0.005	<0.0001	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	<0.005	<0.0001	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720		<0.0001												
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728		<0.0001												
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	<0.005		<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724		<0.0001												
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732		<0.0001												
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007		<0.00010	<0.0500	<0.50	<0.50				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015		<0.00010												
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006		<0.00010	<0.0500	<0.50	<0.50				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014		<0.00010												
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	<0.005		<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725		<0.0001												
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733		<0.0001												
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008		<0.00010	<0.0500	<0.50	<0.50				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016		<0.00010												
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009		<0.00010	<0.0500	<0.50	<0.50				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017		<0.00010												
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	<0.005		<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726		<0.0001												
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734		<0.0001												
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	<0.005		<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727		<0.0001												
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735		<0.0001												
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010		<0.00010	<0.0500	<0.50	<0.50				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018		<0.00010												
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55369	<0.005		<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371		<0.0001												
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373		<0.0001												
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001		<0.00001	<0.0002	<0.01	<0.02				<0.01	<0.01	<0.02	<0.02	<0.02	<0.02
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005		<0.00001												
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002		<0.00001	<0.0002	<0.01	<0.02				<0.01	<0.01	<0.02	<0.02	<0.02	<0.02
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006		<0.00001												
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370	<0.005		<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372		<0.0001												
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374		<0.0001												

	trans-1,2-dichloroethene		NA			PCBs							pH			
			Sum of WADWIER PFAS (n=10)*		Moisture Content	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1221	Arochlor 1260	Arochlor 1016	PCBs (Sum of total)	pH (after HCl)	pH (Final)	pH (Initial)
	mg/kg	mg/kg	UG/KG	µg/L	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-
EQL	0.02	0.02	0.05		1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold																
EPA PFAS Classification - Tunnel Zone - 2019/405 (SO 9038560) Threshold																
EPA PFAS Classification - Tunnel Zone - 2019/406 (SO 9038561) Threshold																
EPA PFAS Classification - Tunnel Zone - No option for disposal threshold																
EPA Victoria IWRG621 Category B Leached Upper Limits																
EPA Victoria IWRG621 Category B Upper Limits																
EPA Victoria IWRG621 Category C Leached Upper Limits																
EPA Victoria IWRG621 Category C Upper Limits																
EPA Victoria IWRG621 Fill Upper Limits													2			

Location Code	Field ID	Sample Code															
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720			<0.05											5.1	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728			<0.05											8.9	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724			<0.05											5.1	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732			<0.05											9.1	
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	<0.50	<0.50	<10.0	<0.05	25.3						<0.1	1.4	5.1	9.5	
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015				<0.05										9.7	
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	<0.50	<0.50	<10.0	<0.05	28.8						<0.1	1.4	5.1	9.5	
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014				<0.05										9.6	
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725			<0.05											5.1	
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733			<0.05											9.0	
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	<0.50	<0.50	<10.0	<0.05	31.2						<0.1	1.4	5.1	9.4	
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016				<0.05										9.5	
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	<0.50	<0.50	<10.0	<0.05	30.0						<0.1	1.5	5.1	9.6	
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017				<0.05										9.5	
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726			<0.05											5.2	
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734			<0.05											9.2	
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727			<0.05											5.1	
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735			<0.05											9.2	
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	<0.50	<0.50	<10.0	<0.05	29.1						<0.1	1.4	5.0	9.4	
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018				<0.05										9.5	
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55369	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371			<0.05											5.1	
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373			<0.05											8.4	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	<0.02	<0.02	<0.2	<0.01	27.4						<0.1	1.2	5.0	8.8	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005				<0.01										9.3	
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	<0.02	<0.02	<0.2	<0.01	28.4						<0.1	1.2	4.9	8.9	
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006				<0.01										9.4	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370	<0.5	<0.5	<10			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372			<0.05											5.1	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374			<0.05											8.9	

	Inorganics					Halogenated Benzenes							Halogenated Hydrocarbons			
	pH of Leaching Fluid	pH (aqueous extract)	Fluoride mg/kg	Moisture Content (dried @ 103°C) %	Cyanide Total mg/kg	1,2,4-trichlorobenzene mg/kg	1,2-dichlorobenzene mg/kg	1,3-dichlorobenzene mg/kg	1,4-dichlorobenzene mg/kg	Bromobenzene mg/kg	p-chlorotoluene mg/kg	Chlorobenzene mg/kg	Iodomethane mg/kg	Bromomethane mg/kg	1,2-dibromoethane mg/kg	Dichlorodifluoromethane mg/kg
EQL	0.1	0.1	40	1	1	0.01	0.02	0.5	0.02	0.5	0.5	0.02	0.5	0.5	0.5	0.5
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			40,000		10,000											
EPA Victoria IWRG621 Category C Leached Upper Limits																
EPA Victoria IWRG621 Category C Upper Limits			10,000		2,500											
EPA Victoria IWRG621 Fill Upper Limits			450		50											

Location Code	Field ID	Sample Code																
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712		7.4	<100	24	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720	5.0															
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728	6.9															
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716		7.4	<100	25	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724	5.0															
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732	6.9															
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007	5.0		540		<5	<0.50	<0.50		<0.50		<0.50					
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015																
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006	5.0		420		<5	<0.50	<0.50		<0.50		<0.50					
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014																
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717		8.3	<100	31	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725	5.0															
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733	6.9															
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008	5.0		350		<5	<0.50	<0.50		<0.50		<0.50					
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016																
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009	5.0		340		<5	<0.50	<0.50		<0.50		<0.50					
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017																
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718		8.7	530	28	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726	5.0															
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734	6.9															
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719		8.2	<100	27	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727	5.0															
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735	6.9															
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010	5.0		480		<5	<0.50	<0.50		<0.50		<0.50					
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018																
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55369		8.1	<100	26	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371	5.0															
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373	6.9															
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001	5.0		130		<1	<0.01	<0.02		<0.02		<0.02					
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005																
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002	5.0		160		<1	<0.01	<0.02		<0.02		<0.02					
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370		8.4	<100	27	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372	5.0															
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374	6.9															

	MAH							Solvents					SPOCAS
	Trichlorofluoromethane	Total MAH	Monocyclic aromatic hydrocarbons EPA/Vic	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl ketone	pH (CaCl2)
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	-
EPA PFAS Classification - Tunnel Zone - 2019/404 (SO 9038429) Threshold	0.5	0.5	0.2	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) 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			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	Sample Code												
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53712	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53720												
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	M22-Ma53728												
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53716	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53724												
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	M22-Ma53732												
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361007			<0.5		<0.5							7.8
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	EM2205361015												
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361006			<0.5		<0.5							7.7
C04.01	SX_OB_20220324_16_35_SS_Primary_ALS	EM2205361014												
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53717	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53725												
C04.01	SX_OB_20220324_20_06_SS_Primary_EUF	M22-Ma53733												
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361008			<0.5		<0.5							7.7
C04.01	SX_OB_20220324_20_13_SS_Primary_ALS	EM2205361016												
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361009			<0.5		<0.5							7.8
C04.01	SX_OB_20220325_00_08_SS_Primary_ALS	EM2205361017												
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53718	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53726												
C04.01	SX_OB_20220325_00_16_SS_Primary_EUF	M22-Ma53734												
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53719	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53727												
C04.01	SX_OB_20220325_04_07_SS_Primary_EUF	M22-Ma53735												
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361010			<0.5		<0.5							7.7
C04.01	SX_OB_20220325_04_18_SS_Primary_ALS	EM2205361018												
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55369	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55371												
C04.01	SX_OB_20220325_08_18_SS_Primary_EUF	M22-Ma55373												
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462001			<0.2		<0.5							7.6
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	EM2205462005												
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462002			<0.2		<0.5							7.6
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	EM2205462006												
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55370	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55372												
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	M22-Ma55374												

							Arsenic	Cadmium	Copper	Chromium (III+VI)	Chromium (hexavalent)
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							2	0.4	5	2	0.5

Location Code	Field ID	Date	Lab Report Number	Lab Name	Sample Type	Parent Sample	Arsenic	Cadmium	Copper	Chromium (III+VI)	Chromium (hexavalent)
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	24/03/2022	874462	MGT	Normal		31	<0.4	70	140	1.0
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	24/03/2022	874462	MGT	Field_D	M22-Ma53712	29	<0.4	61	130	<1
RPD							7	0	14	7	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	24/03/2022	874462	MGT	Normal		31	<0.4	70	140	1.0
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	24/03/2022	EM2205361	ALSE-Melbourne	Interlab_D	M22-Ma53712	19	<1	52	102	1.6
RPD							48	0	30	31	46
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	24/03/2022	874462	MGT	Normal						
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	24/03/2022	874462	MGT	Field_D	M22-Ma53720					
RPD											
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	24/03/2022	874462	MGT	Normal						
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	24/03/2022	874462	MGT	Field_D	M22-Ma53728					
RPD											
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	24/03/2022	874462	MGT	Normal						
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	24/03/2022	EM2205361	ALSE-Melbourne	Interlab_D	M22-Ma53728					
RPD											
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	24/03/2022	EM2205361	ALSE-Melbourne	Normal		24	<1	54	96	1.4
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	24/03/2022	EM2205361	ALSE-Melbourne	Field_D	EM2205361001	27	<1	57	102	<1.0
RPD							12	0	5	6	33
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	24/03/2022	EM2205361	ALSE-Melbourne	Normal		24	<1	54	96	1.4
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	24/03/2022	874462	MGT	Interlab_D	EM2205361001	36	<0.4	65	130	<1
RPD							40	0	18	30	33
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	24/03/2022	EM2205361	ALSE-Melbourne	Normal		24	<1	54	96	1.4
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	24/03/2022	874462	MGT	Interlab_D	EM2205361001					
RPD											
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	24/03/2022	EM2205361	ALSE-Melbourne	Normal						
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	24/03/2022	EM2205361	ALSE-Melbourne	Field_D	EM2205361011					
RPD											
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	24/03/2022	EM2205361	ALSE-Melbourne	Normal						
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	24/03/2022	874462	MGT	Interlab_D	EM2205361011					
RPD											
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	25/03/2022	EM2205462	ALSE-Melbourne	Normal		30	<1	54	102	0.9
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	25/03/2022	EM2205462	ALSE-Melbourne	Field_D	EM2205462001	33	<1	56	114	1.2
RPD							10	0	4	11	29
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	25/03/2022	EM2205462	ALSE-Melbourne	Normal		30	<1	54	102	0.9
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	25/03/2022	874677	MGT	Interlab_D	EM2205462001	33	<0.4	64	130	<1
RPD							10	0	17	24	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	25/03/2022	EM2205462	ALSE-Melbourne	Normal		30	<1	54	102	0.9
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	25/03/2022	874677	MGT	Interlab_D	EM2205462001					
RPD											
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	25/03/2022	EM2205462	ALSE-Melbourne	Normal						

							Arsenic	Cadmium	Copper	Chromium (III+VI)	Chromium (hexavalent)
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	25/03/2022	EM2205462	ALSE-Melbourne	Field_D	EM2205462005					
RPD											
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	25/03/2022	EM2205462	ALSE-Melbourne	Normal						
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	25/03/2022	874677	MGT	Interlab_D	EM2205462005					
RPD											

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

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

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

EQL	Metals								PAHs (Vic EPA List)	Benzo(b)-Hk/fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ (LOF)
	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc								
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg								
EQL	5	0.1	2	2	2	2	5	5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5

Location Code	Field ID	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	PAHs (Vic EPA List)	Benzo(b)-Hk/fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ (LOF)
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	5.1	<0.1	<5	250	<2	<2	<10	120			<0.5	<0.5	<0.5	<0.5	<0.5	1.2
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<5	<0.1	<5	210	<2	<2	<10	120			<0.5	<0.5	<0.5	<0.5	<0.5	1.2
RPD		2	0	0	17	0	0	0	0			0	0	0	0	0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	5.1	<0.1	<5	250	<2	<2	<10	120			<0.5	<0.5	<0.5	<0.5	<0.5	1.2
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	<5	<0.1	<5	164	<5	<2	<10	78	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2
RPD		2	0	0	42	0	0	0	42			0	0	0	0	0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
RPD																	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
RPD																	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<5	<0.1	<5	163	<5	<2	<10	86	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	<5	<0.1	<5	169	<5	<2	<10	90	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2
RPD		0	0	0	4	0	0	0	5	0	0	0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<5	<0.1	<5	163	<5	<2	<10	86	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	<5	<0.1	<5	210	<2	<2	<10	130			<0.5	<0.5	<0.5	<0.5	<0.5	1.2
RPD		0	0	0	25	0	0	0	41			0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<5	<0.1	<5	163	<5	<2	<10	86	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<5	<0.1	<2	175	<5	<2	<5	101	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	<5	<0.1	<2	178	<5	<2	<5	94	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2
RPD		0	0	0	2	0	0	0	7	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<5	<0.1	<2	175	<5	<2	<5	101	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	<5	<0.1	<5	210	<2	<2	<10	120			<0.5	<0.5	<0.5	<0.5	<0.5	1.2
RPD		0	0	0	18	0	0	0	17			0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<5	<0.1	<2	175	<5	<2	<5	101	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	1.2
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																

		Metals								PAHs (Vic EPA List)							
		Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ (LOR)	
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
 **Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multi
 ***Interlab Duplicates are matched on a per compound basis as methods vary between laborator

EQL	PAH															Benzene	Ethylbenzene
	Benzo(a)pyrene TEQ calc (Half)	Benzo(a) pyrene	Benzo(b+g)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)			
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
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	0.1	0.1

Location Code	Field ID	Benzo(a)pyrene TEQ calc (Half)	Benzo(a) pyrene	Benzo(b+g)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	Ethylbenzene
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	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	<0.1
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	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	<0.1
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	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	<0.1
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	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	<0.5
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
RPD																	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
RPD																	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	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	<0.5
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	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	<0.5
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	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	<0.5
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	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	<0.1
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	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	<0.5
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	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	<0.5
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	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	<0.5
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	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	<0.5
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	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	<0.1
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	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	<0.5
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																

		PAH															
		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	Ethylbenzene
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
 **Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multi
 ***Interlab Duplicates are matched on a per compound basis as methods vary between laborator

	BTEX				TRH							TPH				
	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
EQL	0.1	0.1	0.2	0.3	10	10	50	50	100	100	50	10	20	50	50	50

Location Code	Field ID	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)
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
RPD																	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
RPD																	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<100	<100	<50	<20	<50	<100	<100	<50
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.5	<0.5	<0.5	<0.5	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	<0.5	<0.5	<0.5	<0.5	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.5	<0.5	<0.5	<0.5	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	<0.1	<0.1	<0.2	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.5	<0.5	<0.5	<0.5	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																

		BTEX				TRH						TPH					
		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	H-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
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	

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

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

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

	Organochlorine Pesticides															
	Aldrin	Dieldrin	Aldrin + Dieldrin	DDD	DDT	4,4-DDE	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endrin	Endrin ketone	Endrin aldehyde	Endosulfan sulphate	Chlordane	Chlordane (cis)	Chlordane (trans)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.03	0.03	0.03	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.05	0.03	0.03	0.03	0.03	0.03

Location Code	Field ID	Aldrin	Dieldrin	Aldrin + Dieldrin	DDD	DDT	4,4-DDE	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endrin	Endrin ketone	Endrin aldehyde	Endosulfan sulphate	Chlordane	Chlordane (cis)	Chlordane (trans)
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1		
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1		
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0		
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1		
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	<0.05	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03
RPD		0	0	0	0	0	0	0	0	0	0		0	0	0		
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
RPD																	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
RPD																	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.05	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	<0.05	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03
RPD		0	0	0	0	0	0	0	0	0	0		0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.05	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1		
RPD		0	0	0	0	0	0	0	0	0	0		0	0	0		
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.05	<0.05	<0.30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.10	<0.03	<0.03
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.03		<0.03	<0.03	<0.03	<0.03	<0.03
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.03		<0.03	<0.03	<0.03	<0.03	<0.03
RPD		0	0	0	0	0	0	0	0	0	0		0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.03		<0.03	<0.03	<0.03	<0.03	<0.03
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1		
RPD		0	0	0	0	0	0	0	0	0	0		0	0	0		
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.03		<0.03	<0.03	<0.03	<0.03	<0.03
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																

		Organochlorine Pesticides															
		Aldrin	Dieldrin	Aldrin + Dieldrin	DDD	DDT	4,4-DDE	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endrin	Endrin ketone	Endrin aldehyde	Endosulfan sulphate	Chlordane	Chlordane (cis)	Chlordane (trans)
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
 **Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multi
 ***Interlab Duplicates are matched on a per compound basis as methods vary between laborator

	Hexachlorobenzene	Heptachlor	Heptachlor epoxide	a-BHC	b-BHC	d-BHC	g-BHC (Lindane)	Methoxychlor	Toxaphene	Organochlorine pesticides EPAV/c	Other organochlorine pesticides EPAV/c	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
EQL	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.5	0.03	0.03	0.03	0.03	0.05	0.05	0.03

Location Code	Field ID	Hexachlorobenzene	Heptachlor	Heptachlor epoxide	a-BHC	b-BHC	d-BHC	g-BHC (Lindane)	Methoxychlor	Toxaphene	Organochlorine pesticides EPAV/c	Other organochlorine pesticides EPAV/c	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<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	<0.5
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<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	<0.5
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<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	<0.5
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	<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	<0.50	
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
RPD																	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
RPD																	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<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	<0.50	
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	<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	<0.50	
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<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	<0.50	
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	<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	<0.5
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<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	<0.50	
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.03
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.03
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.03
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	<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	<0.5
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.03
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																

		Hexachlorobenzene	Heptachlor	Heptachlor epoxide	a-BHC	b-BHC	d-BHC	g-BHC (Lindane)	Methoxychlor	Toxaphene	Organochlorine pesticides EPAV/c	Other organochlorine pesticides EPAV/c	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	

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

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

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

		Phenols															
		4-chloro-3-methylphenol	Pentachlorophenol	2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4,6-Dinitro-2-methylphenol	Tetrachlorophenols	2,3,5,6-Tetrachlorophenol	Cresol Total	4,6-Dinitro-o-cyclohexyl phenol	Phenols (halogenated) EPAVic	Phenols (non-halogenated) EPAVic	2,4-Dimethylphenol	2-Methylphenol	2-Nitrophenol	2,4-Dinitrophenol	3,8,4-Methylphenol (m&g-cresol)	4-Nitrophenol
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
EQL		0.03	0.2	0.05	5	10	0.03	0.5	5	0.03	1	0.5	0.2	1	5	0.4	5

Location Code	Field ID	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	3,8,4-Methylphenol (m&g-cresol)	4-Nitrophenol
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<1	<1		<5	<10		<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<1	<1		<5	<10		<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5
	RPD	0	0		0	0		0	0			0	0	0	0	0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<1	<1		<5	<10		<0.5	<20			<0.5	<0.2	<1	<5	<0.4	<5
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5
	RPD	0	0		0				0			0	0	0	0	0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
	RPD																
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
	RPD																
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS																
	RPD																
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5
	RPD	0	0	0	0		0		0	0	0	0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	<1	<1		<5	<10		<0.5	<20		<20	<0.5	<0.2	<1	<5	<0.4	<5
	RPD	0	0		0				0			0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<1.00	<1.0	<0.05	<5		<0.03		<20	<1.00	<20	<1	<1	<1	<5	<1	<5
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
	RPD																
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS																
	RPD																
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
	RPD																
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.03	<0.2	<0.05	<5		<0.03		<5	<0.03	<1	<1	<1	<1	<5	<1	<5
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	<0.03	<0.2	<0.05	<5		<0.03		<5	<0.03	<1	<1	<1	<1	<5	<1	<5
	RPD	0	0	0	0		0		0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.03	<0.2	<0.05	<5		<0.03		<5	<0.03	<1	<1	<1	<1	<5	<1	<5
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	<1	<1		<5	<10		<0.5	<20		<20	<0.5	<0.2	<1	<5	<0.4	<5
	RPD	0	0		0				0			0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.03	<0.2	<0.05	<5		<0.03		<5	<0.03	<1	<1	<1	<1	<5	<1	<5
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
	RPD																
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																

		Phenols															
		4-chloro-3-methylphenol	Pentachlorophenol	2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4,6-Dinitro-2-methylphenol	Tetrachlorophenols	2,3,5,6-Tetrachlorophenol	Cresol Total	4,6-Dinitro-o-cyclohexyl phenol	Phenols (halogenated) EPAVic	Phenols (non-halogenated) EPAVic	2,4-Dimethylphenol	2-Methylphenol	2-Nitrophenol	2,4-Dinitrophenol	3,8,4-Methylphenol (m&g-cresol)	4-Nitrophenol
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	

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

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

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

EQL	Dinoseb	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	N-Ethyl perfluorooctane				
	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L				
EQL	5	0.5	1	20	0.00001	0.0005	0.00001	0.0005	0.00005	0.0005	0.00001	0.0005	0.00005

Location Code	Field ID	Dinoseb	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	N-Ethyl perfluorooctane			
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<20	<0.5	<1	<20	<0.0005	<0.005	<0.0005	<0.01	<0.005			
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<20	<0.5	<1	<20	<0.0005	<0.005	<0.0005	<0.01	<0.005			
RPD		0	0	0	0	0	0	0	0	0			
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<20	<0.5	<1	<20	<0.0005	<0.005	<0.0005	<0.01	<0.005			
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	<20	<1			<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	
RPD		0	0			0	0	0	0	0	0	0	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF					<0.00001	<0.00001	<0.00005	<0.00001	<0.00005	<0.00001	<0.00005	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF					<0.00001	<0.00001	<0.00005	<0.00001	<0.00005	<0.00001	<0.00005	
RPD						0	0	0	0	0	0	0	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF					<0.00001	<0.00001	<0.00005	<0.00001	<0.00005	<0.00001	<0.00005	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF					<0.00001	<0.00001	<0.00005	<0.00001	<0.00005	<0.00001	<0.00005	
RPD						0	0	0	0	0	0	0	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF					<0.00001	<0.00001	<0.00005	<0.00001	<0.00005	<0.00001	<0.00005	
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	
RPD						0	0	0	0	0	0	0	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<20	<1			<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.00005
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	<20	<1			<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.00005
RPD		0	0			0	0	0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<20	<1			<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.00005
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	<20	<0.5	<1	<20	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.00005
RPD		0	0			0	0	0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<20	<1			<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.00005
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF					<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
RPD						0	0	0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
RPD						0	0	0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF					<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
RPD						0	0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<5	<1			<0.00005	<0.0005	<0.00005	<0.0005	<0.00005	<0.0005	<0.00005	<0.00005
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	<5	<1			<0.00005	<0.0005	<0.00005	<0.0005	<0.00005	<0.0005	<0.00005	<0.00005
RPD		0	0			0	0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<5	<1			<0.00005	<0.0005	<0.00005	<0.0005	<0.00005	<0.0005	<0.00005	<0.00005
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	<20	<0.5	<1	<20	<0.0005	<0.005	<0.0005	<0.01	<0.0005	<0.005	<0.0005	<0.0005
RPD		0	0			0	0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<5	<1			<0.00005	<0.0005	<0.00005	<0.0005	<0.00005	<0.0005	<0.00005	<0.00005
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF					<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
RPD						0	0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005

		Dinoseb	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	N-Ethyl perfluorooctane	
		mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
RPD						0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF					<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00005
RPD						0	0	0	0	0	0

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

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

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

EQL	sulfonamide (NETFOSA)	N-ethyl-perfluorooctanesulfonamide doacetic acid (NETFOSAA)		N-ethylperfluorooctanesulfonamide ethanol (NETFOSE)		N-Methyl perfluorooctane sulfonamide (NMeFOSA)		N-methylperfluorooctane sulfonamide doacetic acid (NMeFOSAA)		N-Methylperfluorooctanesulfonamide ethanol (N-MeFOSE)		Perfluorobutanoic acid (PFBA)
	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L
EQL	0.0005	0.00002	0.0002	0.00005	0.0005	0.00005	0.0005	0.00002	0.0002	0.00005	0.0005	0.00005

Location Code	Field ID											
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.005		<0.01		<0.005		<0.005		<0.01		<0.005
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<0.005		<0.01		<0.005		<0.005		<0.01		<0.005
RPD		0		0		0		0		0		0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.005		<0.01		<0.005		<0.005		<0.01		<0.005
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0001
RPD		0		0		0		0		0		0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005	<0.00005
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005	<0.00005
RPD			0		0		0		0		0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005	<0.00005
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005	<0.00005
RPD			0		0		0		0		0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005	<0.00005
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005	<0.0001
RPD			0		0		0		0		0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0001
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0001
RPD		0	0	0	0	0	0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.0050	<0.00005	<0.0100	<0.00005	<0.0050	<0.00005	<0.0050	<0.00005	<0.0100	<0.00005	<0.0001
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005	<0.00005
RPD			0		0		0		0		0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005	<0.0001
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005	<0.0001
RPD			0		0		0		0		0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005	<0.0001
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005	<0.00005
RPD			0		0		0		0		0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.0005	<0.00002	<0.0002	<0.00005	<0.0005	<0.00005	<0.0005	<0.00002	<0.0002	<0.00005	<0.0005
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	<0.0005	<0.00002	<0.0002	<0.00005	<0.0005	<0.00005	<0.0005	<0.00002	<0.0002	<0.00005	<0.0005
RPD		0	0	0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.0005	<0.00002	<0.0002	<0.00005	<0.0005	<0.00005	<0.0005	<0.00002	<0.0002	<0.00005	<0.0005
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	<0.005		<0.01		<0.005		<0.005		<0.01		<0.005
RPD		0		0		0		0		0		0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.0005	<0.00002	<0.0002	<0.00005	<0.0005	<0.00005	<0.0005	<0.00002	<0.0002	<0.00005	<0.0005
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005	<0.00005
RPD			0		0		0		0		0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS		<0.00002		<0.00005		<0.00005		<0.00002		<0.00005	<0.0001

		sulfonamide (NETFOSA)		N-ethyl-perfluorooctanesulfonamidoacetic acid (NETFOAAA)		N-ethylperfluorooctanesulfonamidoethanol (NETFOSE)		N-Methyl perfluorooctane sulfonamide (NMeFOSA)		N-methylperfluorooctane sulfonamidoacetic acid (NMeFOAAA)		N-Methylperfluorooctanesulfonamidoethanol (NMeFOSE)		Perfluorobutanoic acid (PFBA)	
		mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L		
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS		<0.00002		<0.00005		<0.00005		<0.00002		<0.00005		<0.0001		
RPD			0		0		0		0		0		0		
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS		<0.00002		<0.00005		<0.00005		<0.00002		<0.00005		<0.0001		
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		<0.00005		
RPD			0		0		0		0		0		0		

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

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

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

EQL	Perfluorobutane sulfonic acid (PFBS)			Perfluorodecanoic acid (PFDA)			Perfluorododecanoic acid (PFDoDA)			Perfluorodecane sulfonic acid (PFDS)		Perfluoroheptanoic acid (PFHpA)		Perfluoroheptane sulfonic acid
	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	
EQL	0.001	0.00001	0.0002	0.00001	0.0002	0.00001	0.0002	0.00001	0.0002	0.00001	0.0002	0.00001	0.0002	0.00001

Location Code	Field ID	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/L
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		
RPD		0		0		0		0		0		0		
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.00002
RPD		0		0		0		0		0		0		
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD		0		0		0		0		0		0		
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD		0		0		0		0		0		0		
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
RPD		0		0		0		0		0		0		
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.00002
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.00002
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.00002
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	<0.005	<0.00002	<0.005	<0.00002	<0.005	<0.00002	<0.005	<0.00002	<0.005	<0.00002	<0.005	<0.00002	<0.00002
RPD		0		0		0		0		0		0		
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.005	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00002	<0.00002
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD		0		0		0		0		0		0		
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
RPD		0		0		0		0		0		0		
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD		0		0		0		0		0		0		
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.001	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.00002
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	<0.001	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.00002
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.001	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.00002
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005		<0.005
RPD		0		0		0		0		0		0		
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.001	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002	<0.00002	<0.00002
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001
RPD		0		0		0		0		0		0		
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002

		Perfluorobutane sulfonic acid (PFBS)		Perfluorodecanoic acid (PFDA)		Perfluorododecanoic acid (PFDoDA)		Perfluorodecanesulfonic acid (PFDS)		Perfluoroheptanoic acid (PFHpA)		Perfluoroheptane sulfonic
		mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/L
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002	<0.00002
RPD			0		0		0		0		0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS		<0.00002		<0.00002		<0.00002		<0.00002		<0.00002	<0.00002
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	<0.00001
RPD			0		0		0		0		0	0

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

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

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

EQI	PFOS/PFOA											
	acid (PFHpS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluorooctanoic acid (PFNS)(trace)	Perfluorooctanoic acid (PFNS)(trace)	Perfluorooctanoic acid (PFNS)(trace)	Perfluorooctanoic acid (PFNS)(trace)	Perfluorooctanoic acid (PFNS)(trace)	Perfluorooctanoic acid (PFNS)(trace)	Perfluorooctanoic acid (PFNS)(trace)
	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L
EQI	0.0002	0.00001	0.0002	0.00001	0.0002	0.00001	0.005	0.00001	0.0002	0.00002	0.0002	0.00001

Location Code	Field ID	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005	
RPD		0		0		0		0		0		0	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.005		<0.005		<0.005		<0.005		<0.005		<0.005	
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050		<0.00001	<0.0050	<0.00005	<0.0050	<0.00002	
RPD		0		0		0		0		0		0	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.00005		<0.00001
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.00005		<0.00001
RPD			0		0		0		0		0		0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.00005		<0.00001
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.00005		<0.00001
RPD			0		0		0		0		0		0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.00005		<0.00001
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS		<0.00002		<0.00002		<0.00001		<0.00001		<0.00005		<0.00002
RPD			0		0		0		0		0		0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050		<0.00001	<0.0050	<0.00005	<0.0050	<0.00002	
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050		<0.00001	<0.0050	<0.00005	<0.0050	<0.00002	
RPD		0	0	0	0	0		0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050		<0.00001	<0.0050	<0.00005	<0.0050	<0.00002	
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.00005		<0.00001
RPD			0		0		0		0		0		0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS		<0.00002		<0.00002		<0.00001		<0.00001		<0.00005		<0.00002
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS		<0.00002		<0.00002		<0.00001		<0.00001		<0.00005		<0.00002
RPD			0		0		0		0		0		0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS		<0.00002		<0.00002		<0.00001		<0.00001		<0.00005		<0.00002
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.00005		<0.00001
RPD			0		0		0		0		0		0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002		<0.00001	<0.0002	<0.00002	<0.0002	<0.00002	
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002		<0.00001	<0.0002	<0.00002	<0.0002	<0.00002	
RPD		0	0	0	0	0		0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002		<0.00001	<0.0002	<0.00002	<0.0002	<0.00002	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	<0.005		<0.005		<0.005	<0.005		<0.005		<0.005		
RPD		0	0	0	0	0		0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.0002	<0.00002	<0.0002	<0.00002	<0.0002		<0.00001	<0.0002	<0.00002	<0.0002	<0.00002	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.00005		<0.00001
RPD			0		0		0		0		0		0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS		<0.00002		<0.00002		<0.00001		<0.00001		<0.00002		<0.00002

		PFOS/PFOA										
		Perfluorohexanoic acid (PFHxA)		Perfluorononanoic acid (PFNA)		Perfluoronanesulfonic acid (PFNS)(trace)		Perfluorooctanoic acid (PFOA)		Perfluorooctane sulfonamide (PFOSA)		Perfluoropentanoic acid
acid (PFHpS)		mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/L
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS		<0.00002		<0.00002				<0.00001		<0.00002	<0.00002
RPD			0		0				0		0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS		<0.00002		<0.00002				<0.00001		<0.00002	<0.00002
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.00005	<0.00001
RPD			0		0				0		0	0

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

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

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

EQL	(PFPeA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropane sulfonic acid (PFPrS)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorooctanesulfonic					
	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/L					
EQL	0.0002	0.00001	0.0002	0.00001	0.005	0.00001	0.0005	0.00001	0.0002	0.00001	0.0002	0.00001

Location Code	Field ID	(PFPeA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropropane sulfonic acid (PFPrS)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorooctanesulfonic				
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.005		<0.005		<0.005		<0.005				
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<0.005		<0.005		<0.005		<0.005				
RPD		0		0		0		0				
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.005		<0.005		<0.005		<0.005				
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	<0.0050	<0.00002	<0.0050		<0.00005	<0.0050	<0.00002	<0.0050	<0.00001	<0.00001	
RPD		0		0		0		0		0		
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF		<0.00001	<0.00001		<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF		<0.00001	<0.00001		<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	
RPD			0	0		0	0	0		0	0	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF		<0.00001	<0.00001		<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF		<0.00001	<0.00001		<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	
RPD			0	0		0	0	0		0	0	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF		<0.00001	<0.00001		<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS		<0.00002			<0.00005	<0.00002	<0.00002		<0.00002	<0.00001	
RPD			0			0	0	0		0	0	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.0050	<0.00002	<0.0050		<0.00005	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00001
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	<0.0050	<0.00002	<0.0050		<0.00005	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00001
RPD		0	0	0		0	0	0	0	0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.0050	<0.00002	<0.0050		<0.00005	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00001
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.00001
RPD		0		0		0		0		0		0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.0050	<0.00002	<0.0050		<0.00005	<0.0050	<0.00002	<0.0050	<0.00002	<0.0050	<0.00001
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF		<0.00001	<0.00001		<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001
RPD			0			0	0	0		0		0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS		<0.00002			<0.00005	<0.00002	<0.00002		<0.00002	<0.00001	<0.00001
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS		<0.00002			<0.00005	<0.00002	<0.00002		<0.00002	<0.00001	<0.00001
RPD			0			0	0	0		0		0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS		<0.00002			<0.00005	<0.00002	<0.00002		<0.00002	<0.00001	<0.00001
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF		<0.00001	<0.00001		<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001
RPD			0			0	0	0		0		0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.0002	<0.00002	<0.0002		<0.00005	<0.0005	<0.00002	<0.0002	<0.00002	<0.0002	<0.00001
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	<0.0002	<0.00002	<0.0002		<0.00005	<0.0005	<0.00002	<0.0002	<0.00002	<0.0002	<0.00001
RPD		0	0	0		0	0	0	0	0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.0002	<0.00002	<0.0002		<0.00005	<0.0005	<0.00002	<0.0002	<0.00002	<0.0002	<0.00001
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.00001
RPD		0		0		0		0		0		0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.0002	<0.00002	<0.0002		<0.00005	<0.0005	<0.00002	<0.0002	<0.00002	<0.0002	<0.00001
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF		<0.00001	<0.00001		<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001
RPD			0			0		0		0		0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS		<0.00002			<0.00005	<0.00002	<0.00002		<0.00002	<0.00001	<0.00001

		Perfluoropentane sulfonic acid (PFPeS)		Perfluoropropanesulfonic acid (PFPrS)		Perfluorotetradecanoic acid (PFTeDA)		Perfluorotridecanoic acid (PFTrDA)		Perfluoroundecanoic acid (PFUnDA)		Perfluorooctanesulfonic
		(PFPeA)	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS		<0.00002			<0.00005		<0.00002		<0.00002		<0.00001
RPD			0			0		0		0		0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS		<0.00002			<0.00005		<0.00002		<0.00002		<0.00001
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF		<0.00001		<0.00001	<0.00001		<0.00001		<0.00001		<0.00001
RPD			0			0		0		0		0

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

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

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

EQL	acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)		Sum of PFHxS and PFOS		Sum of US EPA PFAS (PFOS + PFOA)*		Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*		Sum of PFAS	Sum of PFAS	1,1-dichloroethane	1,1-dichloroethene
	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/kg	mg/kg
EQL	0.0002	0.00001	0.0002	0.00001	0.0002	0.00001	0.005	0.00001	0.005	0.00001	0.0002	0.5	0.01

Location Code	Field ID	acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)		Sum of PFHxS and PFOS		Sum of US EPA PFAS (PFOS + PFOA)*		Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*		Sum of PFAS	Sum of PFAS	1,1-dichloroethane	1,1-dichloroethene
		mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/kg	mg/kg
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.005		<0.005		<0.005		<0.005		<0.005		<0.05	<0.5	<0.5
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<0.005		<0.005		<0.005		<0.005		<0.005		<0.05	<0.5	<0.5
RPD		0		0		0		0		0		0	0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.005		<0.005		<0.005		<0.005		<0.005		<0.05	<0.5	<0.5
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	<0.0050	<0.00001	<0.0050	<0.00001	<0.0050				<0.00010	<0.0500		<0.50	
RPD		0		0		0					0		0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.0001			
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.0001			
RPD			0		0		0		0		0			
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.0001			
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.0001			
RPD			0		0		0		0		0			
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.0001			
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS		<0.00001		<0.00001		<0.00001		<0.00001		<0.00010			
RPD			0		0						0			
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.0050	<0.00001	<0.0050	<0.00001	<0.0050				<0.00010	<0.0500		<0.50	
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	<0.0050	<0.00001	<0.0050	<0.00001	<0.0050				<0.00010	<0.0500		<0.50	
RPD		0	0	0	0	0				0	0		0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.0050	<0.00001	<0.0050	<0.00001	<0.0050				<0.00010	<0.0500		<0.50	
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	<0.005		<0.005		<0.005	<0.005	<0.005	<0.005		<0.05	<0.5	<0.5	
RPD		0		0		0					0		0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.0050	<0.00001	<0.0050	<0.00001	<0.0050				<0.00010	<0.0500		<0.50	
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.0001			
RPD			0		0						0			
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS		<0.00001		<0.00001					<0.00010				
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS		<0.00001		<0.00001					<0.00010				
RPD			0		0						0			
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS		<0.00001		<0.00001					<0.00010				
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.0001			
RPD			0		0						0			
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.0002	<0.00001	<0.0002	<0.00001	<0.0002				<0.00001	<0.0002		<0.01	
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	<0.0002	<0.00001	<0.0002	<0.00001	<0.0002				<0.00001	<0.0002		<0.01	
RPD		0	0	0	0	0				0	0		0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.0002	<0.00001	<0.0002	<0.00001	<0.0002				<0.00001	<0.0002		<0.01	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	<0.005		<0.005		<0.005	<0.005	<0.005	<0.005		<0.05	<0.5	<0.5	
RPD		0		0		0					0		0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.0002	<0.00001	<0.0002	<0.00001	<0.0002				<0.00001	<0.0002		<0.01	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.0001			
RPD			0		0						0			
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS		<0.00001		<0.00001					<0.00001				

		acid (PFOS)		Perfluorohexane sulfonic acid (PFHxS)		Sum of PFHxS and PFOS		Sum of US EPA PFAS (PFOS + PFOA)*		Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*		Sum of PFAS		1,1-dichloroethane	1,1-dichloroethene	
		mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/kg	mg/kg		
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS		<0.00001		<0.00001							<0.00001				
RPD			0		0							0				
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS		<0.00001		<0.00001							<0.00001				
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF		<0.00001		<0.00001		<0.00001		<0.00001		<0.00001	<0.0001				
RPD			0		0							0				

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

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

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

	Chlorinated Hydrocarbons															
	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	1,1,1,2-tetrachloroethane	Bromodichloromethane	1,1,1-trichloroethane	Chloroform	1,1,2,2-tetrachloroethane	Chloromethane	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Other chlorinated hydrocarbons EPA/Vic
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
	0.5	0.02	0.5	0.5	0.5	0.01	0.5	0.01	0.02	0.02	0.5	0.5	0.5	0.4	0.02	0.01

Location Code	Field ID	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	1,1,1,2-tetrachloroethane	Bromodichloromethane	1,1,1-trichloroethane	Chloroform	1,1,2,2-tetrachloroethane	Chloromethane	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Other chlorinated hydrocarbons EPA/Vic
C04.01	SX_OB_20220324_16_24_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
C04.01	SX_OB_20220324_16_25_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
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C04.01	SX_OB_20220324_16_24_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
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS		<0.50				<0.50		<0.50	<0.50	<0.50				<0.5	<0.50	<0.50
RPD			0				0		0	0	0				0	0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
RPD																	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
RPD																	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS		<0.50				<0.50		<0.50	<0.50	<0.50				<0.5	<0.50	<0.50
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS		<0.50				<0.50		<0.50	<0.50	<0.50				<0.5	<0.50	<0.50
RPD			0				0		0	0	0				0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS		<0.50				<0.50		<0.50	<0.50	<0.50				<0.5	<0.50	<0.50
C03.01	SX_OB_20220324_08_13_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
RPD			0				0		0	0	0				0	0	0
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS		<0.50				<0.50		<0.50	<0.50	<0.50				<0.5	<0.50	<0.50
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS		<0.02				<0.01		<0.01	<0.02	<0.02				<0.4	<0.02	<0.01
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS		<0.02				<0.01		<0.01	<0.02	<0.02				<0.4	<0.02	<0.01
RPD			0				0		0	0	0				0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS		<0.02				<0.01		<0.01	<0.02	<0.02				<0.4	<0.02	<0.01
C04.01	SX_OB_20220325_08_30_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
RPD			0				0		0	0	0				0	0	0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS		<0.02				<0.01		<0.01	<0.02	<0.02				<0.4	<0.02	<0.01
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																

		Chlorinated Hydrocarbons															
		1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	1,1,1,2-tetrachloroethane	Bromodichloromethane	1,1,1-trichloroethane	Chloroform	1,1,1,2-tetrachloroethane	Chloromethane	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Other chlorinated hydrocarbons EPA Vc
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	

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

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

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

	Trichloroethene	Chlorinated hydrocarbons EPAVic	cis-1,2-dichloroethene	1,1,2-trichloroethane	trans-1,3-dichloropropene	Vinyl chloride	Bromoform	Carbon tetrachloride	Chlorobromomethane	Chloroethane	trans-1,2-dichloroethene	Tetrachloroethene	NA			
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	Sum of WA DWER PFAS (n=10)* UG/KG	Moisture Content µg/L	Moisture Content %	Archlor 1232 mg/kg
EQL	0.02	0.01	0.01	0.04	0.5	0.02	0.5	0.01	0.5	0.5	0.02	0.02	0.05		1	0.1

Location Code	Field ID	Trichloroethene	Chlorinated hydrocarbons EPAVic	cis-1,2-dichloroethene	1,1,2-trichloroethane	trans-1,3-dichloropropene	Vinyl chloride	Bromoform	Carbon tetrachloride	Chlorobromomethane	Chloroethane	trans-1,2-dichloroethene	Tetrachloroethene	Sum of WA DWER PFAS (n=10)* UG/KG	Moisture Content µg/L	Moisture Content %	Archlor 1232 mg/kg
C04.01	SX_OB_20220324_16_24_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	<10			<0.1
C04.01	SX_OB_20220324_16_25_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	<10			<0.1
RPD		0	0	0	0	0	0	0	0	0	0	0	0	0			0
C04.01	SX_OB_20220324_16_24_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	<10			<0.1
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50			<0.50	<0.50	<10.0	<0.05	25.3	
RPD		0	0	0	0		0		0			0	0	0			
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF													<0.05			
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF													<0.05			
RPD														0			
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF													<0.05			
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF													<0.05			
RPD														0			
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF													<0.05			
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS														<0.05		
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50			<0.50	<0.50	<10.0	<0.05	25.8	
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50			<0.50	<0.50	<10.0	<0.05	28.0	
RPD		0	0	0	0		0		0			0	0	0	0	8	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50			<0.50	<0.50	<10.0	<0.05	25.8	
C03.01	SX_OB_20220324_08_13_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	<10			<0.1
RPD		0	0	0	0		0		0			0	0	0			
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50			<0.50	<0.50	<10.0	<0.05	25.8	
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF													<0.05			
RPD														0			
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS														<0.05		
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS														<0.05		
RPD														0			
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS														<0.05		
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF													<0.05			
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.02	<0.01	<0.01	<0.04		<0.02		<0.01			<0.02	<0.02	<0.2	<0.01	27.4	
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	<0.02	<0.01	<0.01	<0.04		<0.02		<0.01			<0.02	<0.02	<0.2	<0.01	28.4	
RPD		0	0	0	0		0		0			0	0	0	0	4	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.02	<0.01	<0.01	<0.04		<0.02		<0.01			<0.02	<0.02	<0.2	<0.01	27.4	
C04.01	SX_OB_20220325_08_30_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	<10			<0.1
RPD		0	0	0	0		0		0			0	0	0			
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.02	<0.01	<0.01	<0.04		<0.02		<0.01			<0.02	<0.02	<0.2	<0.01	27.4	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF													<0.05			
RPD														0			
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS														<0.01		

													NA				
		Trichloroethene	Chlorinated hydrocarbons EPAVic	cis-1,2-dichloroethene	1,1,2-trichloroethane	trans-1,3-dichloropropene	Vinyl chloride	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	trans-1,2-dichloroethene	Tetrachloroethene	Sum of WA DWER PFAS (n=10)*	Moisture Content	Archlor 1232	
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	UG/KG	µg/L	%	mg/kg
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS														<0.01		
RPD															0		
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS														<0.01		
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF													<0.05			
RPD																	

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

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

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

	PCBs							Inorganics							Halo			
	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1221	Arochlor 1260	Arochlor 1016	PCBs (Sum of total)	pH (after HCL)	pH (Final)	pH (Initial)	pH of Leaching Fluid	pH (aqueous extract)	Fluoride	Moisture Content (dried @ 103°C)	Cyanide Total	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene
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
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40	1	1	0.01	0.02	0.5

Location Code	Field ID	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1221	Arochlor 1260	Arochlor 1016	PCBs (Sum of total)	pH (after HCL)	pH (Final)	pH (Initial)	pH of Leaching Fluid	pH (aqueous extract)	Fluoride	Moisture Content (dried @ 103°C)	Cyanide Total	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					7.4	<100	24	<5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					7.4	<100	25	<5	<0.5	<0.5	<0.5
RPD		0	0	0	0	0	0	0					0	0	4	0	0	0	0
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					7.4	<100	24	<5	<0.5	<0.5	<0.5
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS							<0.1	1.4	5.1	9.5	5.0		540		<5	<0.50	<0.50	
RPD								0					138		0	0	0		
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF									5.1		5.0							
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF									5.1		5.0							
RPD										0		0							
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF									8.9		6.9							
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF									9.1		6.9							
RPD										2		0							
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF									8.9		6.9							
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS									9.7									
RPD										9									
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS							<0.1	1.4	5.1	9.2	5.0		880		<5	<0.50	<0.50	
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS							<0.1	1.4	5.1	9.3	5.0		550		<5	<0.50	<0.50	
RPD								0	0	0	1	0		46		0	0	0	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS							<0.1	1.4	5.1	9.2	5.0		880		<5	<0.50	<0.50	
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					9.1	<100	28	<5	<0.5	<0.5	<0.5
RPD								0						159		0	0	0	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS							<0.1	1.4	5.1	9.2	5.0		880		<5	<0.50	<0.50	
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF									5.2		5.0							
RPD										2		0							
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS									9.7									
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS									10.1									
RPD										4									
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS									9.7									
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF									9.3		6.9							
RPD										4									
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS							<0.1	1.2	5.0	8.8	5.0		130		<1	<0.01	<0.02	
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS							<0.1	1.2	4.9	8.9	5.0		160		<1	<0.01	<0.02	
RPD								0	0	2	1	0		21		0	0	0	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS							<0.1	1.2	5.0	8.8	5.0		130		<1	<0.01	<0.02	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					8.4	<100	27	<5	<0.5	<0.5	<0.5
RPD								0						26		0	0	0	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS							<0.1	1.2	5.0	8.8	5.0		130		<1	<0.01	<0.02	
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF									5.1		5.0							
RPD										2		0							
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS									9.3									

		PCBs						Inorganics								Halogens			
		Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1221	Arochlor 1260	Arochlor 1016	PCBs (Sum of total)	pH (after HCL)	pH (Final)	pH (Initial)	pH of Leaching Fluid	pH (aqueous extract)	Fluoride	Moisture Content (dried @ 103°C)	Cyanide Total	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	-	-	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS								9.4										
RPD									1										
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS								9.3										
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF								8.9		6.9								
RPD									4										

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
 **Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multi
 ***Interlab Duplicates are matched on a per compound basis as methods vary between laborator

	enated Benzenes				Halogenated Hydrocarbons						MAH					
	1,4-dichlorobenzene	Bromobenzene	4-chlorotoluene	Chlorobenzene	Iodomethane	Bromomethane	1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Total MAH	Monocyclic aromatic hydrocarbons EPA/Vic	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone
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
	0.02	0.5	0.5	0.02	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5

Location Code	Field ID	1,4-dichlorobenzene	Bromobenzene	4-chlorotoluene	Chlorobenzene	Iodomethane	Bromomethane	1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Total MAH	Monocyclic aromatic hydrocarbons EPA/Vic	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone
C04.01	SX_OB_20220324_16_24_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
C04.01	SX_OB_20220324_16_25_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
RPD		0	0	0	0	0	0	0	0	0	0		0	0	0	0	0
C04.01	SX_OB_20220324_16_24_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
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS	<0.50			<0.50							<0.5		<0.5			
RPD		0			0									0			
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
RPD																	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF																
RPD																	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF																
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.50			<0.50							<0.5		<0.5			
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS	<0.50			<0.50							<0.5		<0.5			
RPD		0			0							0		0			
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.50			<0.50							<0.5		<0.5			
C03.01	SX_OB_20220324_08_13_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
RPD		0			0									0			
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS	<0.50			<0.50							<0.5		<0.5			
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS																
RPD																	
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS																
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.02			<0.02							<0.2		<0.5			
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS	<0.02			<0.02							<0.2		<0.5			
RPD		0			0							0		0			
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.02			<0.02							<0.2		<0.5			
C04.01	SX_OB_20220325_08_30_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
RPD		0			0									0			
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS	<0.02			<0.02							<0.2		<0.5			
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																

		enated Benzenes				Halogenated Hydrocarbons					MAH						
		1,4-dichlorobenzene	Bromobenzene	4-chlorotoluene	Chlorobenzene	Iodomethane	Bromomethane	1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Total MAH	Monocyclic aromatic hydrocarbons EPA/Vic	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	4-Methyl-2-pentanone
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS																
RPD																	
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS																
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF																
RPD																	

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
 **Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multi
 ***Interlab Duplicates are matched on a per compound basis as methods vary between laborator

	Solvents				SPOCAS
	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl Ketone	pH (CaCl2)
	mg/kg	mg/kg	mg/kg	mg/kg	
EQL	0.5	0.5	0.5	0.5	0.1

Location Code	Field ID					
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF	<0.5	<0.5	<0.5	<0.5	
RPD		0	0	0	0	
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF	<0.5	<0.5	<0.5	<0.5	
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS					7.8
RPD						
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF					
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF					
RPD						
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF					
C04.01	SX_OB_20220324_16_25_SS_Duplicate_EUF					
RPD						
C04.01	SX_OB_20220324_16_24_SS_Primary_EUF					
C04.01	SX_OB_20220324_16_27_SS_Triplicate_ALS					
RPD						
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS					8.0
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS					8.2
RPD						2
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS					8.0
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF	<0.5	<0.5	<0.5	<0.5	
RPD						
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS					8.0
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF					
RPD						
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS					
C03.01	SX_OB_20220324_08_11_SS_Duplicate_ALS					
RPD						
C03.01	SX_OB_20220324_08_07_SS_Primary_ALS					
C03.01	SX_OB_20220324_08_13_SS_Triplicate_EUF					
RPD						
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS					7.6
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS					7.6
RPD						0
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS					7.6
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF	<0.5	<0.5	<0.5	<0.5	
RPD						
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS					7.6
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF					
RPD						
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS					

		Solvents				SPOCAS
		Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl Ketone	pH (CaCl2)
		mg/kg	mg/kg	mg/kg	mg/kg	-
C04.01	SX_OB_20220325_08_27_SS_Duplicate_ALS					
RPD						
C04.01	SX_OB_20220325_08_25_SS_Primary_ALS					
C04.01	SX_OB_20220325_08_30_SS_Triplicate_EUF					
RPD						

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

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

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

TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	C04.0120220407133105_02	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001 01</u>
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ATTACHMENT B: 95% UCL AVE CALCULATIONS

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		ProUCL 5.17/04/2022 1:43:54 PM									
5	From File		WorkSheet.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10												
11	Arsenic											
12												
13	General Statistics											
14	Total Number of Observations				14		Number of Distinct Observations				12	
15							Number of Missing Observations				0	
16	Minimum				19		Mean				34.5	
17	Maximum				62		Median				32.5	
18	SD				9.866		Std. Error of Mean				2.637	
19	Coefficient of Variation				0.286		Skewness				1.684	
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic				0.825		Shapiro Wilk GOF Test					
23	5% Shapiro Wilk Critical Value				0.874		Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic				0.234		Lilliefors GOF Test					
25	5% Lilliefors Critical Value				0.226		Data Not Normal at 5% Significance Level					
26	Data Not Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
30	95% Student's-t UCL				39.17		95% Adjusted-CLT UCL (Chen-1995)				40.11	
31							95% Modified-t UCL (Johnson-1978)				39.37	
32												
33	Gamma GOF Test											
34	A-D Test Statistic				0.8		Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value				0.734		Data Not Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic				0.203		Kolmogorov-Smirnov Gamma GOF Test					
37	5% K-S Critical Value				0.228		Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data follow Appr. Gamma Distribution at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)				15.17		k star (bias corrected MLE)				11.97	
42	Theta hat (MLE)				2.275		Theta star (bias corrected MLE)				2.883	
43	nu hat (MLE)				424.7		nu star (bias corrected)				335	
44	MLE Mean (bias corrected)				34.5		MLE Sd (bias corrected)				9.974	
45							Approximate Chi Square Value (0.05)				293.6	
46	Adjusted Level of Significance				0.0312		Adjusted Chi Square Value				288.5	
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50)				39.37		95% Adjusted Gamma UCL (use when n<50)				40.07	
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.901		Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value				0.874		Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic				0.186		Lilliefors Lognormal GOF Test					

	A	B	C	D	E	F	G	H	I	J	K	L	
55	5% Lilliefors Critical Value				0.226	Data appear Lognormal at 5% Significance Level							
56	Data appear Lognormal at 5% Significance Level												
57													
58	Lognormal Statistics												
59	Minimum of Logged Data				2.944	Mean of logged Data				3.508			
60	Maximum of Logged Data				4.127	SD of logged Data				0.263			
61													
62	Assuming Lognormal Distribution												
63	95% H-UCL				39.57	90% Chebyshev (MVUE) UCL				41.78			
64	95% Chebyshev (MVUE) UCL				45.09	97.5% Chebyshev (MVUE) UCL				49.69			
65	99% Chebyshev (MVUE) UCL				58.74								
66													
67	Nonparametric Distribution Free UCL Statistics												
68	Data appear to follow a Discernible Distribution at 5% Significance Level												
69													
70	Nonparametric Distribution Free UCLs												
71	95% CLT UCL				38.84	95% Jackknife UCL				39.17			
72	95% Standard Bootstrap UCL				38.77	95% Bootstrap-t UCL				42.24			
73	95% Hall's Bootstrap UCL				66.48	95% Percentile Bootstrap UCL				38.64			
74	95% BCA Bootstrap UCL				40.14								
75	90% Chebyshev(Mean, Sd) UCL				42.41	95% Chebyshev(Mean, Sd) UCL				45.99			
76	97.5% Chebyshev(Mean, Sd) UCL				50.97	99% Chebyshev(Mean, Sd) UCL				60.74			
77													
78	Suggested UCL to Use												
79	95% Adjusted Gamma UCL				40.07								
80													
81	When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test												
82	When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL												
83													
84	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.												
85	Recommendations are based upon data size, data distribution, and skewness.												
86	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).												
87	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.												
88													
89													
90	Nickel												
91													
92	General Statistics												
93	Total Number of Observations				14	Number of Distinct Observations				11			
94						Number of Missing Observations				0			
95	Minimum				164	Mean				196.1			
96	Maximum				250	Median				189.5			
97	SD				26.19	Std. Error of Mean				7			
98	Coefficient of Variation				0.134	Skewness				0.918			
99													
100	Normal GOF Test												
101	Shapiro Wilk Test Statistic				0.902	Shapiro Wilk GOF Test							
102	5% Shapiro Wilk Critical Value				0.874	Data appear Normal at 5% Significance Level							
103	Lilliefors Test Statistic				0.236	Lilliefors GOF Test							
104	5% Lilliefors Critical Value				0.226	Data Not Normal at 5% Significance Level							
105	Data appear Approximate Normal at 5% Significance Level												
106													
107	Assuming Normal Distribution												
108	95% Normal UCL						95% UCLs (Adjusted for Skewness)						

	A	B	C	D	E	F	G	H	I	J	K	L
109	95% Student's-t UCL					208.5	95% Adjusted-CLT UCL (Chen-1995)					209.5
110							95% Modified-t UCL (Johnson-1978)					208.8
111												
112	Gamma GOF Test											
113	A-D Test Statistic					0.531	Anderson-Darling Gamma GOF Test					
114	5% A-D Critical Value					0.733	Detected data appear Gamma Distributed at 5% Significance Level					
115	K-S Test Statistic					0.226	Kolmogorov-Smirnov Gamma GOF Test					
116	5% K-S Critical Value					0.228	Detected data appear Gamma Distributed at 5% Significance Level					
117	Detected data appear Gamma Distributed at 5% Significance Level											
118												
119	Gamma Statistics											
120	k hat (MLE)					63.85	k star (bias corrected MLE)					50.21
121	Theta hat (MLE)					3.072	Theta star (bias corrected MLE)					3.906
122	nu hat (MLE)					1788	nu star (bias corrected)					1406
123	MLE Mean (bias corrected)					196.1	MLE Sd (bias corrected)					27.68
124							Approximate Chi Square Value (0.05)					1320
125	Adjusted Level of Significance					0.0312	Adjusted Chi Square Value					1309
126												
127	Assuming Gamma Distribution											
128	95% Approximate Gamma UCL (use when n>=50)					208.9	95% Adjusted Gamma UCL (use when n<50)					210.7
129												
130	Lognormal GOF Test											
131	Shapiro Wilk Test Statistic					0.924	Shapiro Wilk Lognormal GOF Test					
132	5% Shapiro Wilk Critical Value					0.874	Data appear Lognormal at 5% Significance Level					
133	Lilliefors Test Statistic					0.217	Lilliefors Lognormal GOF Test					
134	5% Lilliefors Critical Value					0.226	Data appear Lognormal at 5% Significance Level					
135	Data appear Lognormal at 5% Significance Level											
136												
137	Lognormal Statistics											
138	Minimum of Logged Data					5.1	Mean of logged Data					5.271
139	Maximum of Logged Data					5.521	SD of logged Data					0.128
140												
141	Assuming Lognormal Distribution											
142	95% H-UCL					209	90% Chebyshev (MVUE) UCL					216.3
143	95% Chebyshev (MVUE) UCL					225.5	97.5% Chebyshev (MVUE) UCL					238.2
144	99% Chebyshev (MVUE) UCL					263.2						
145												
146	Nonparametric Distribution Free UCL Statistics											
147	Data appear to follow a Discernible Distribution at 5% Significance Level											
148												
149	Nonparametric Distribution Free UCLs											
150	95% CLT UCL					207.7	95% Jackknife UCL					208.5
151	95% Standard Bootstrap UCL					207.1	95% Bootstrap-t UCL					210.8
152	95% Hall's Bootstrap UCL					210.5	95% Percentile Bootstrap UCL					207.9
153	95% BCA Bootstrap UCL					208						
154	90% Chebyshev(Mean, Sd) UCL					217.1	95% Chebyshev(Mean, Sd) UCL					226.7
155	97.5% Chebyshev(Mean, Sd) UCL					239.9	99% Chebyshev(Mean, Sd) UCL					265.8
156												
157	Suggested UCL to Use											
158	95% Student's-t UCL					208.5						
159												
160	When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test											
161	When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL											
162												

	A	B	C	D	E	F	G	H	I	J	K	L
163	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
164	Recommendations are based upon data size, data distribution, and skewness.											
165	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
166	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
167												
168	Fluoride											
169												
170	General Statistics											
171	Total Number of Observations				14		Number of Distinct Observations				9	
172	Number of Detects				8		Number of Non-Detects				6	
173	Number of Distinct Detects				8		Number of Distinct Non-Detects				1	
174	Minimum Detect				130		Minimum Non-Detect				100	
175	Maximum Detect				540		Maximum Non-Detect				100	
176	Variance Detects				24584		Percent Non-Detects				42.86%	
177	Mean Detects				368.8		SD Detects				156.8	
178	Median Detects				385		CV Detects				0.425	
179	Skewness Detects				-0.593		Kurtosis Detects				-1.017	
180	Mean of Logged Detects				5.801		SD of Logged Detects				0.543	
181												
182	Normal GOF Test on Detects Only											
183	Shapiro Wilk Test Statistic				0.9		Shapiro Wilk GOF Test					
184	5% Shapiro Wilk Critical Value				0.818		Detected Data appear Normal at 5% Significance Level					
185	Lilliefors Test Statistic				0.177		Lilliefors GOF Test					
186	5% Lilliefors Critical Value				0.283		Detected Data appear Normal at 5% Significance Level					
187	Detected Data appear Normal at 5% Significance Level											
188												
189	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
190	KM Mean			253.6		KM Standard Error of Mean			49.47			
191	KM SD			173.1		95% KM (BCA) UCL			334.3			
192	95% KM (t) UCL			341.2		95% KM (Percentile Bootstrap) UCL			329.3			
193	95% KM (z) UCL			334.9		95% KM Bootstrap t UCL			342.2			
194	90% KM Chebyshev UCL			402		95% KM Chebyshev UCL			469.2			
195	97.5% KM Chebyshev UCL			562.5		99% KM Chebyshev UCL			745.8			
196												
197	Gamma GOF Tests on Detected Observations Only											
198	A-D Test Statistic			0.562		Anderson-Darling GOF Test						
199	5% A-D Critical Value			0.719		Detected data appear Gamma Distributed at 5% Significance Level						
200	K-S Test Statistic			0.242		Kolmogorov-Smirnov GOF						
201	5% K-S Critical Value			0.295		Detected data appear Gamma Distributed at 5% Significance Level						
202	Detected data appear Gamma Distributed at 5% Significance Level											
203												
204	Gamma Statistics on Detected Data Only											
205	k hat (MLE)			4.743		k star (bias corrected MLE)			3.048			
206	Theta hat (MLE)			77.75		Theta star (bias corrected MLE)			121			
207	nu hat (MLE)			75.89		nu star (bias corrected)			48.76			
208	Mean (detects)			368.8								
209												
210	Gamma ROS Statistics using Imputed Non-Detects											
211	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
212	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
213	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
214	This is especially true when the sample size is small.											
215	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
216	Minimum			0.01		Mean			235.8			

	A	B	C	D	E	F	G	H	I	J	K	L
217					Maximum	540					Median	148.4
218					SD	199.5					CV	0.846
219					k hat (MLE)	0.419					k star (bias corrected MLE)	0.377
220					Theta hat (MLE)	562.5					Theta star (bias corrected MLE)	625.5
221					nu hat (MLE)	11.74					nu star (bias corrected)	10.56
222					Adjusted Level of Significance (β)	0.0312						
223					Approximate Chi Square Value (10.56, α)	4.293					Adjusted Chi Square Value (10.56, β)	3.777
224					95% Gamma Approximate UCL (use when $n \geq 50$)	580					95% Gamma Adjusted UCL (use when $n < 50$)	659.2
225												
226	Estimates of Gamma Parameters using KM Estimates											
227					Mean (KM)	253.6					SD (KM)	173.1
228					Variance (KM)	29980					SE of Mean (KM)	49.47
229					k hat (KM)	2.145					k star (KM)	1.733
230					nu hat (KM)	60.05					nu star (KM)	48.52
231					theta hat (KM)	118.2					theta star (KM)	146.3
232					80% gamma percentile (KM)	386					90% gamma percentile (KM)	510.3
233					95% gamma percentile (KM)	629.8					99% gamma percentile (KM)	897.3
234												
235	Gamma Kaplan-Meier (KM) Statistics											
236					Approximate Chi Square Value (48.52, α)	33.53					Adjusted Chi Square Value (48.52, β)	31.88
237					95% Gamma Approximate KM-UCL (use when $n \geq 50$)	366.9					95% Gamma Adjusted KM-UCL (use when $n < 50$)	385.9
238												
239	Lognormal GOF Test on Detected Observations Only											
240					Shapiro Wilk Test Statistic	0.834					Shapiro Wilk GOF Test	
241					5% Shapiro Wilk Critical Value	0.818					Detected Data appear Lognormal at 5% Significance Level	
242					Lilliefors Test Statistic	0.271					Lilliefors GOF Test	
243					5% Lilliefors Critical Value	0.283					Detected Data appear Lognormal at 5% Significance Level	
244	Detected Data appear Lognormal at 5% Significance Level											
245												
246	Lognormal ROS Statistics Using Imputed Non-Detects											
247					Mean in Original Scale	250.1					Mean in Log Scale	5.225
248					SD in Original Scale	184.1					SD in Log Scale	0.834
249					95% t UCL (assumes normality of ROS data)	337.2					95% Percentile Bootstrap UCL	331.5
250					95% BCA Bootstrap UCL	336.5					95% Bootstrap t UCL	347.3
251					95% H-UCL (Log ROS)	472.9						
252												
253	Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution											
254					KM Mean (logged)	5.289					KM Geo Mean	198
255					KM SD (logged)	0.705					95% Critical H Value (KM-Log)	2.343
256					KM Standard Error of Mean (logged)	0.202					95% H-UCL (KM -Log)	401.7
257					KM SD (logged)	0.705					95% Critical H Value (KM-Log)	2.343
258					KM Standard Error of Mean (logged)	0.202						
259												
260	DL/2 Statistics											
261	DL/2 Normal						DL/2 Log-Transformed					
262					Mean in Original Scale	232.1					Mean in Log Scale	4.991
263					SD in Original Scale	200.1					SD in Log Scale	1.049
264					95% t UCL (Assumes normality)	326.8					95% H-Stat UCL	588.1
265	DL/2 is not a recommended method, provided for comparisons and historical reasons											
266												
267	Nonparametric Distribution Free UCL Statistics											
268	Detected Data appear Normal Distributed at 5% Significance Level											
269												
270	Suggested UCL to Use											

	A	B	C	D	E	F	G	H	I	J	K	L
271	95% KM (t) UCL					341.2						
272												
273	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
274	Recommendations are based upon data size, data distribution, and skewness.											
275	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
276	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
277												

TBM Spoil Waste Categorisation Report

TBM Spoil Waste Cat Report No:	C04.0120220407133105_02	This report is attached as part of a WCR form referencing <u>WGT-302-000-WKN-CJH-105-SWI-0001 01</u>
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ATTACHMENT C: LABORATORY CERTIFICATES



CHAIN OF CUSTODY RECORD

0 Sydney Laboratory
 Unit F3 Bld F 16 Mars Road Launceston Cove West NSW 2006
 029900 8400 EMail:Sydney@eurofins.com

D Brisbane Laboratory
 Unit 1/7 Smallwood Place Misarrie QLD 4172
 07 3902 4600 EMail:brisbane@eurofins.com

D Perth Laboratory
 Unit 1/2 91 Leakey Highway Kewdale WA 6105
 0892519600 EnviroSampleWA@eurofins.com

O Melbourne Laboratory
 6 Moorilla Road Dandenong South VIC 3175
 03 8564 5000 EnviroSampleVro@eurofins.com

Company: AGON Environmental - Tunnel Spoil Testing		Project No: JC0927	Project Manager: Craig Trimbur	Sampler(s): Luke D - EP Risk / Tina B - Agon										
Address: Unit H76, 63-85 Tumor Street Port Melbourne VIC 3207		Project Name: WGTP-Tunnel Ref: 20220325043216-Eurofin-13	EDD Format: ESdal, ESoutS etc	Handed over by: f.Ylmci S.										
Contact Name: Craig Trimbur / David Lawson	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 other sample receipt documentation.	Where metals are requested, please specify 'Total' or 'Filtered'. SUITE code must be used to attract SUITE pricing.	Email for Invoice: finance@agonenviro.com.au / LabReports.TST@agonenviro.com.au											
Phone No: +61 400 826 907 (Craig) / +61 480 411 004 (David)			Email for Results: agonenvironmental@esdal.com.au / motherhouse@wgtp.com.au / Amrit.Kaur@gile-analytics.com.au											
Purchase Order: Agon WGTP TST			Required Turnaround Time (TAT): Default will be 5 days if not ticked. <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											
Quote ID No: Agon WGTP TST			Sample Comments: Dangerous Goods Hazard Warning											
No	Client Sample ID	Sampled Date/Time	Matrix	S	F	T	U	V	W	X	Y	Z	Other	Count
1	SX_OB_20220324_16_24_SS_Primary_EUF	24.03.2022/16:24	S	X	X									1
2	SX_OB_20220324_12_27_SS_Primary_EUF	24.03.2022/12:27	S	X										1
3	SX_OB_20220324_08_18_SS_Primary_EUF	24.03.2022/08:18	S											1
4	SX_OB_20220324_08_13_SS_Triplicate_EUF	24.03.2022/08:13	S					X	X					1
5	SX_OB_20220324_16_25_SS_DI(4)11cate_EUF	24.03.2022/16:25	S					X	X					1
6	SX_OB_20220324_20_06_SS_Primary_EUF	24.03.2022/20:06	S					X	X					1
7	SX_OB_20220325_00_16_SS_Primary_EUF	25.03.2022/00:16	S					X	X					1
8	SX_OB_20220325_04_07_SS_Primary_EUF	25.03.2022/04:07	S					X	X					1
Total Counts														5
Method of Shipment: <input checked="" type="checkbox"/> Courier (#) <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Postal		Name: Emma Strong	Signature:	Date: 25/03/22	Time: 10:22am									
Laboratory Use Only		Received By: Emily D	Signature:	Date: 25/03	Time: 2:30pm	Temperature: 19.2°C								

Handwritten: dulbonah 874462

Handwritten: 19.4-0.2
19.2°C

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 **874462-L**
Project name **20220325043216-Eurofin-13**
Project ID **JC0927**
Received Date **Mar 25, 2022**

Client Sample ID			SX_OB_20220 324_16_24_SS _Primary_EUF	SX_OB_20220 324_12_27_SS _Primary_EUF	SX_OB_20220 324_08_18_SS _Primary_EUF	SX_OB_20220 324_08_13_SS _Triuplicate_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-Ma53720	M22-Ma53721	M22-Ma53722	M22-Ma53723
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 24, 2022	Mar 24, 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	5.1	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	%	112	148	128	122
13C5-PFPeA (surr.)	1	%	87	119	112	106
13C5-PFHxA (surr.)	1	%	103	139	128	116
13C4-PFHpA (surr.)	1	%	107	147	120	116
13C8-PFOA (surr.)	1	%	97	90	126	131
13C5-PFNA (surr.)	1	%	91	133	100	110
13C6-PFDA (surr.)	1	%	69	102	83	83
13C2-PFUnDA (surr.)	1	%	50	79	75	70
13C2-PFDoDA (surr.)	1	%	36	66	53	63
13C2-PFTeDA (surr.)	1	%	57	116	77	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_OB_20220 324_16_24_SS _Primary_EUF	SX_OB_20220 324_12_27_SS _Primary_EUF	SX_OB_20220 324_08_18_SS _Primary_EUF	SX_OB_20220 324_08_13_SS _Triuplicate_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-Ma53720	M22-Ma53721	M22-Ma53722	M22-Ma53723
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 24, 2022	Mar 24, 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	%	97	116	126	129
D3-N-MeFOSA (surr.)	1	%	57	84	57	87
D5-N-EtFOSA (surr.)	1	%	53	81	53	85
D7-N-MeFOSE (surr.)	1	%	72	110	91	98
D9-N-EtFOSE (surr.)	1	%	70	103	88	95
D5-N-EtFOSAA (surr.)	1	%	36	44	41	35
D3-N-MeFOSAA (surr.)	1	%	39	60	54	58
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	%	62	29	127	88
18O2-PFHxS (surr.)	1	%	92	124	117	110
13C8-PFOS (surr.)	1	%	93	126	113	117
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	%	80	141	138	141
13C2-6:2 FTSA (surr.)	1	%	95	103	110	109
13C2-8:2 FTSA (surr.)	1	%	145	139	97	77
13C2-10:2 FTSA (surr.)	1	%	77	120	107	128
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 324_16_25_SS Duplicate_EU F	SX_OB_20220 324_20_06_SS Primary_EUF	SX_OB_20220 325_00_16_SS Primary_EUF	SX_OB_20220 325_04_07_SS Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0
Eurofins Sample No.			M22-Ma53724	M22-Ma53725	M22-Ma53726	M22-Ma53727
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 25, 2022	Mar 25, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{CO1}		comment	1.0	1.0	1.0	1.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	5.0	5.0	5.0	5.0
pH (off)	0.1	pH Units	5.1	5.1	5.2	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	%	119	116	116	90
13C5-PFPeA (surr.)	1	%	109	99	101	102
13C5-PFHxA (surr.)	1	%	111	104	113	82
13C4-PFHpA (surr.)	1	%	110	109	100	95
13C8-PFOA (surr.)	1	%	100	90	109	64
13C5-PFNA (surr.)	1	%	106	103	97	104
13C6-PFDA (surr.)	1	%	76	76	83	78
13C2-PFUnDA (surr.)	1	%	65	58	62	70
13C2-PFDoDA (surr.)	1	%	55	50	54	58
13C2-PFTeDA (surr.)	1	%	118	86	92	20
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	%	114	112	114	87
D3-N-MeFOSA (surr.)	1	%	74	74	74	66
D5-N-EtFOSA (surr.)	1	%	73	74	74	63
D7-N-MeFOSE (surr.)	1	%	91	87	83	70
D9-N-EtFOSE (surr.)	1	%	87	84	80	69
D5-N-EtFOSAA (surr.)	1	%	39	44	37	36
D3-N-MeFOSAA (surr.)	1	%	47	55	41	40

Client Sample ID			SX_OB_20220 324_16_25_SS Duplicate_EU F	SX_OB_20220 324_20_06_SS _Primary_EUF	SX_OB_20220 325_00_16_SS _Primary_EUF	SX_OB_20220 325_04_07_SS _Primary_EUF
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - pH 5.0
Eurofins Sample No.			M22-Ma53724	M22-Ma53725	M22-Ma53726	M22-Ma53727
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 25, 2022	Mar 25, 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	%	67	36	114	27
18O2-PFHxS (surr.)	1	%	116	96	114	90
13C8-PFOS (surr.)	1	%	107	100	113	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	%	83	96	136	117
13C2-6:2 FTSA (surr.)	1	%	134	111	90	75
13C2-8:2 FTSA (surr.)	1	%	126	120	136	130
13C2-10:2 FTSA (surr.)	1	%	111	91	101	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

Client Sample ID			SX_OB_20220 324_16_24_SS _Primary_EUF	SX_OB_20220 324_12_27_SS _Primary_EUF	SX_OB_20220 324_08_18_SS _Primary_EUF	SX_OB_20220 324_08_13_SS TriPLICATE_EU F
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-Ma53728	M22-Ma53729	M22-Ma53730	M22-Ma53731
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 24, 2022	Mar 24, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{C01}		comment	4.0	4.0	4.0	4.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	6.9	6.9	6.9	6.9
pH (off)	0.1	pH Units	8.9	9.0	9.0	9.3

Client Sample ID			SX_OB_20220 324_16_24_SS _Primary_EUF	SX_OB_20220 324_12_27_SS _Primary_EUF	SX_OB_20220 324_08_18_SS _Primary_EUF	SX_OB_20220 324_08_13_SS _Triplicate_EU F
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-Ma53728	M22-Ma53729	M22-Ma53730	M22-Ma53731
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 24, 2022	Mar 24, 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	%	88	89	90	127
13C5-PFPeA (surr.)	1	%	95	100	110	106
13C5-PFHxA (surr.)	1	%	84	82	89	134
13C4-PFHpA (surr.)	1	%	86	92	87	139
13C8-PFOA (surr.)	1	%	68	59	91	140
13C5-PFNA (surr.)	1	%	101	106	91	114
13C6-PFDA (surr.)	1	%	77	95	72	106
13C2-PFUnDA (surr.)	1	%	70	88	74	87
13C2-PFDoDA (surr.)	1	%	66	69	62	78
13C2-PFTTeDA (surr.)	1	%	20	17	20	129
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	84	78	134
D3-N-MeFOSA (surr.)	1	%	46	42	52	78
D5-N-EtFOSA (surr.)	1	%	40	36	45	63
D7-N-MeFOSE (surr.)	1	%	55	54	56	87
D9-N-EtFOSE (surr.)	1	%	54	54	55	85
D5-N-EtFOSAA (surr.)	1	%	40	53	43	67
D3-N-MeFOSAA (surr.)	1	%	40	49	41	94
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_OB_20220 324_16_24_SS _Primary_EUF	SX_OB_20220 324_12_27_SS _Primary_EUF	SX_OB_20220 324_08_18_SS _Primary_EUF	SX_OB_20220 324_08_13_SS _Triuplicate_EU F
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-Ma53728	M22-Ma53729	M22-Ma53730	M22-Ma53731
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 24, 2022	Mar 24, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSA)						
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	%	53	25	101	123
18O2-PFHxS (surr.)	1	%	87	89	91	126
13C8-PFOS (surr.)	1	%	92	102	82	129
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	%	107	122	77	99
13C2-6:2 FTSA (surr.)	1	%	59	100	55	130
13C2-8:2 FTSA (surr.)	1	%	82	91	144	107
13C2-10:2 FTSA (surr.)	1	%	71	95	71	150
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 324_16_25_SS _Duplicate_EU F	SX_OB_20220 324_20_06_SS _Primary_EUF	SX_OB_20220 325_00_16_SS _Primary_EUF	SX_OB_20220 325_04_07_SS _Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-Ma53732	M22-Ma53733	M22-Ma53734	M22-Ma53735
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 25, 2022	Mar 25, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{C01}		comment	4.0	4.0	4.0	4.0
pH (initial)	0.1	pH Units	N/A	N/A	N/A	N/A
pH (Leachate fluid)	0.1	pH Units	6.9	6.9	6.9	6.9
pH (off)	0.1	pH Units	9.1	9.0	9.2	9.2
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

Client Sample ID			SX_OB_20220 324_16_25_SS Duplicate_EU F	SX_OB_20220 324_20_06_SS Primary_EUF	SX_OB_20220 325_00_16_SS Primary_EUF	SX_OB_20220 325_04_07_SS Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-Ma53732	M22-Ma53733	M22-Ma53734	M22-Ma53735
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 25, 2022	Mar 25, 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	%	143	126	111	87
13C5-PFPeA (surr.)	1	%	118	100	90	85
13C5-PFHxA (surr.)	1	%	138	119	88	79
13C4-PFHpA (surr.)	1	%	139	133	84	89
13C8-PFOA (surr.)	1	%	108	89	76	59
13C5-PFNA (surr.)	1	%	128	120	69	94
13C6-PFDA (surr.)	1	%	109	110	64	77
13C2-PFUnDA (surr.)	1	%	96	97	71	66
13C2-PFDoDA (surr.)	1	%	77	78	72	55
13C2-PFTeDA (surr.)	1	%	107	147	55	16
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	%	142	132	68	80
D3-N-MeFOSA (surr.)	1	%	69	76	81	39
D5-N-EtFOSA (surr.)	1	%	59	73	73	34
D7-N-MeFOSE (surr.)	1	%	83	89	141	48
D9-N-EtFOSE (surr.)	1	%	81	90	141	45
D5-N-EtFOSAA (surr.)	1	%	75	80	30	45
D3-N-MeFOSAA (surr.)	1	%	93	108	29	43
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	%	75	32	92	28
18O2-PFHxS (surr.)	1	%	121	114	94	86
13C8-PFOS (surr.)	1	%	137	134	67	83

Client Sample ID			SX_OB_20220 324_16_25_SS Duplicate_EU F	SX_OB_20220 324_20_06_SS Primary_EUF	SX_OB_20220 325_00_16_SS Primary_EUF	SX_OB_20220 325_04_07_SS Primary_EUF
Sample Matrix			AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-Ma53732	M22-Ma53733	M22-Ma53734	M22-Ma53735
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 25, 2022	Mar 25, 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	%	105	108	104	116
13C2-6:2 FTSA (surr.)	1	%	127	140	64	70
13C2-8:2 FTSA (surr.)	1	%	135	131	99	149
13C2-10:2 FTSA (surr.)	1	%	121	148	71	82
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	Mar 28, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Mar 28, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Mar 28, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 25, 2022	

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

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

Brisbane
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 NATA # 1261 Site # 20794

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 NATA # 1261 Site # 25079

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Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 25, 2022 2:30 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	874462	Due:	Apr 1, 2022
Project Name:	20220325043216-Eurofin-13	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	David Lawson

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoralkyl Substances (PFASs)	IWRG 621 WGTTP 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_20220324_16_24_S_S_Primary_EU_F	Mar 24, 2022	4:24PM	Soil	M22-Ma53712		X	X	X
2	SX_OB_20220324_12_27_S_S_Primary_EU_F	Mar 24, 2022	12:27PM	Soil	M22-Ma53713		X	X	X
3	SX_OB_20220324_08_18_S_S_Primary_EU_F	Mar 24, 2022	8:18AM	Soil	M22-Ma53714		X	X	X

ABN: 50 006 086 521
Melbourne
 6 Monterey Road
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Sydney
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 16 Mars Road
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 Phone : +61 2 9900 8400
 NATA # 1261 Site # 18217

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

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

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

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Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 25, 2022 2:30 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	874462	Due:	Apr 1, 2022
Project Name:	20220325043216-Eurofin-13	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	David Lawson

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoralkyl 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_20220324_08_13_S_S_Triplicate_EUF	Mar 24, 2022	8:13AM	Soil	M22-Ma53715		X	X	X
5	SX_OB_20220324_16_25_S_S_Duplicate_EUF	Mar 24, 2022	4:25PM	Soil	M22-Ma53716		X	X	X
6	SX_OB_20220324_20_06_S_S_Primary_EUF	Mar 24, 2022	8:05PM	Soil	M22-Ma53717		X	X	X
7	SX_OB_20220325_00_16_S	Mar 25, 2022	12:16AM	Soil	M22-Ma53718		X	X	X

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

Project Name: 20220325043216-Eurofin-13
Project ID: JC0927

Order No.:
Report #: 874462
Phone: 08 8338 1009
Fax:

Received: Mar 25, 2022 2:30 PM
Due: Apr 1, 2022
Priority: 5 Day
Contact Name: David Lawson

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoralkyl Substances (PFASs)	WRG 621 WGT/PT 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_20220 325_04_07_S S_Primary_EU F	Mar 25, 2022	4:07PM	Soil	M22-Ma53719		X	X	X
9	SX_OB_20220 324_16_24_S S_Primary_EU F	Mar 24, 2022	4:24PM	AUS Leachate - pH 5.0	M22-Ma53720	X		X	
10	SX_OB_20220 324_12_27_S S_Primary_EU F	Mar 24, 2022	12:27PM	AUS Leachate - pH 5.0	M22-Ma53721	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoralkyl Substances (PFASs)	WRG 621 WGTPE 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_20220324_08_18_S_S_Primary_EU_F	Mar 24, 2022	8:18AM	AUS Leachate - pH 5.0	M22-Ma53722	X		X	
12	SX_OB_20220324_08_13_S_S_Triplicate_EUF	Mar 24, 2022	8:13AM	AUS Leachate - pH 5.0	M22-Ma53723	X		X	
13	SX_OB_20220324_16_25_S_S_Duplicate_EUF	Mar 24, 2022	4:25PM	AUS Leachate - pH 5.0	M22-Ma53724	X		X	
14	SX_OB_20220324_20_06_S	Mar 24, 2022	8:05PM	AUS Leachate - pH 5.0	M22-Ma53725	X		X	

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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoralkyl Substances (PFASs)	WRG 621 WGT/PT 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								
15	SX_OB_20220 325_00_16_S S_Primary_EU F	Mar 25, 2022	12:16AM	AUS Leachate - pH 5.0	M22-Ma53726	X		X	
16	SX_OB_20220 325_04_07_S S_Primary_EU F	Mar 25, 2022	4:07PM	AUS Leachate - pH 5.0	M22-Ma53727	X		X	
17	SX_OB_20220 324_16_24_S S_Primary_EU F	Mar 24, 2022	4:24PM	AUS Leachate - Reagent Water	M22-Ma53728	X		X	

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Contact Name: David Lawson

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoralkyl Substances (PFASs)	WRG 621 WGT/PS 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	SX_OB_20220324_12_27_S_S_Primary_EU_F	Mar 24, 2022	12:27PM	AUS Leachate - Reagent Water	M22-Ma53729	X		X	
19	SX_OB_20220324_08_18_S_S_Primary_EU_F	Mar 24, 2022	8:18AM	AUS Leachate - Reagent Water	M22-Ma53730	X		X	
20	SX_OB_20220324_08_13_S_S_Triplicate_EUF	Mar 24, 2022	8:13AM	AUS Leachate - Reagent Water	M22-Ma53731	X		X	
21	SX_OB_20220324_16_25_S	Mar 24, 2022	4:25PM	AUS Leachate - Reagent	M22-Ma53732	X		X	

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Contact Name: David Lawson

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	WRG 621 W/OTP 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_Duplicate_EUF			Water					
22	SX_OB_20220324_20_06_S_S_Primary_EUF	Mar 24, 2022	8:05PM	AUS Leachate - Reagent Water	M22-Ma53733	X		X	
23	SX_OB_20220325_00_16_S_S_Primary_EUF	Mar 25, 2022	12:16AM	AUS Leachate - Reagent Water	M22-Ma53734	X		X	
24	SX_OB_20220325_04_07_S_S_Primary_EUF	Mar 25, 2022	4:07PM	AUS Leachate - Reagent Water	M22-Ma53735	X		X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 25, 2022 2:30 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	874462	Due:	Apr 1, 2022
Project Name:	20220325043216-Eurofin-13	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	David Lawson

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail	AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	WRG 621 W/GTP 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				
Test Counts	16	8	24	8

Internal Quality Control Review and Glossary

General

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

Holding Times

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

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA. If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

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

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

Units

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	Toxic 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 (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluoronanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	96			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	115			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	96			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	94			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	94			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	92			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	116			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	95			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	101			50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	94			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	104			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code		
LCS - % Recovery									
Perfluoroalkyl sulfonamido substances									
Perfluorooctane sulfonamide (FOSA)	%	97			50-150	Pass			
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	108			50-150	Pass			
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	100			50-150	Pass			
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	99			50-150	Pass			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	100			50-150	Pass			
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	115			50-150	Pass			
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	80			50-150	Pass			
LCS - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)									
Perfluorobutanesulfonic acid (PFBS)	%	83			50-150	Pass			
Perfluorononanesulfonic acid (PFNS)	%	87			50-150	Pass			
Perfluoropropanesulfonic acid (PFPrS)	%	107			50-150	Pass			
Perfluoropentanesulfonic acid (PFPeS)	%	101			50-150	Pass			
Perfluorohexanesulfonic acid (PFHxS)	%	100			50-150	Pass			
Perfluoroheptanesulfonic acid (PFHpS)	%	105			50-150	Pass			
Perfluorooctanesulfonic acid (PFOS)	%	96			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)	%	102			50-150	Pass			
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	86			50-150	Pass			
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	104			50-150	Pass			
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	90			50-150	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)									
Perfluorobutanoic acid (PFBA)	M22-Ma53725	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances									
Perfluorooctane sulfonamide (FOSA)	M22-Ma53725	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma53725	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma53725	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma53725	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma53725	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-Ma53725	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma53725	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma53725	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-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma53725	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma53725	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Ma53729	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Ma53729	CP	ug/L	< 0.01	0.01	30	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ma53729	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma53729	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma53729	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma53729	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma53729	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma53729	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma53729	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma53729	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-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma53729	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma53729	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma53729	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	N/A
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
Mary Makarios	Senior Analyst (NSW)
Joseph Edouard	Senior Analyst (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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Accreditation Number 1261
Site Number 1254

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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 **874462-S**
Project name **20220325043216-Eurofin-13**
Project ID **JC0927**
Received Date **Mar 25, 2022**

Client Sample ID			SX_OB_20220 324_16_24_SS _Primary_EUF	SX_OB_20220 324_12_27_SS _Primary_EUF	SX_OB_20220 324_08_18_SS _Primary_EUF	SX_OB_20220 324_08_13_SS _TriPLICATE_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma53712	M22-Ma53713	M22-Ma53714	M22-Ma53715
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 24, 2022	Mar 24, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Volatile Organics						
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SX_OB_20220 324_16_24_SS _Primary_EUF	SX_OB_20220 324_12_27_SS _Primary_EUF	SX_OB_20220 324_08_18_SS _Primary_EUF	SX_OB_20220 324_08_13_SS _Triplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma53712	M22-Ma53713	M22-Ma53714	M22-Ma53715
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 24, 2022	Mar 24, 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	%	68	64	68	66
Toluene-d8 (surr.)	1	%	57	64	69	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 324_16_24_SS _Primary_EUF	SX_OB_20220 324_12_27_SS _Primary_EUF	SX_OB_20220 324_08_18_SS _Primary_EUF	SX_OB_20220 324_08_13_SS _TriPLICATE_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma53712	M22-Ma53713	M22-Ma53714	M22-Ma53715
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 24, 2022	Mar 24, 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	%	133	139	135	127
p-Terphenyl-d14 (surr.)	1	%	72	68	70	68
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	%	135	111	116	99
Tetrachloro-m-xylene (surr.)	1	%	65	67	71	65

Client Sample ID			SX_OB_20220 324_16_24_SS _Primary_EUF	SX_OB_20220 324_12_27_SS _Primary_EUF	SX_OB_20220 324_08_18_SS _Primary_EUF	SX_OB_20220 324_08_13_SS _Triuplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma53712	M22-Ma53713	M22-Ma53714	M22-Ma53715
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 24, 2022	Mar 24, 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	%	135	111	116	99
Tetrachloro-m-xylene (surr.)	1	%	65	67	71	65
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	%	40	44	38	34
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Chromium (hexavalent)						
Chromium (hexavalent)	1	mg/kg	1.0	< 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	8.7	8.3	9.1
% Moisture						
% Moisture	1	%	24	27	28	28
Heavy Metals						
Arsenic	2	mg/kg	31	35	25	36
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	140	140	120	130
Copper	5	mg/kg	70	71	57	65
Lead	5	mg/kg	5.1	< 5	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			SX_OB_20220 324_16_24_SS _Primary_EUF	SX_OB_20220 324_12_27_SS _Primary_EUF	SX_OB_20220 324_08_18_SS _Primary_EUF	SX_OB_20220 324_08_13_SS _Triuplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma53712	M22-Ma53713	M22-Ma53714	M22-Ma53715
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 24, 2022	Mar 24, 2022
Test/Reference	LOR	Unit				
Heavy Metals						
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	250	220	170	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	120	130	120	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 (PFTeDA) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	119	119	119	118
13C5-PFPeA (surr.)	1	%	77	63	75	74
13C5-PFHxA (surr.)	1	%	77	70	82	78
13C4-PFHpA (surr.)	1	%	72	74	78	73
13C8-PFOA (surr.)	1	%	77	72	76	65
13C5-PFNA (surr.)	1	%	81	81	74	71
13C6-PFDA (surr.)	1	%	62	66	63	58
13C2-PFUnDA (surr.)	1	%	89	86	89	86
13C2-PFDoDA (surr.)	1	%	89	85	84	84
13C2-PFTeDA (surr.)	1	%	97	91	91	82
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	%	98	92	92	93
D3-N-MeFOSA (surr.)	1	%	74	80	83	77
D5-N-EtFOSA (surr.)	1	%	86	85	81	81
D7-N-MeFOSE (surr.)	1	%	74	75	72	71
D9-N-EtFOSE (surr.)	1	%	62	63	60	59
D5-N-EtFOSAA (surr.)	1	%	91	97	89	96
D3-N-MeFOSAA (surr.)	1	%	71	99	81	90

Client Sample ID			SX_OB_20220 324_16_24_SS _Primary_EUF	SX_OB_20220 324_12_27_SS _Primary_EUF	SX_OB_20220 324_08_18_SS _Primary_EUF	SX_OB_20220 324_08_13_SS _Triuplicate_EU F
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma53712	M22-Ma53713	M22-Ma53714	M22-Ma53715
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 24, 2022	Mar 24, 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	%	89	75	94	85
18O2-PFHxS (surr.)	1	%	91	84	82	85
13C8-PFOS (surr.)	1	%	62	76	78	55
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	%	130	133	90	114
13C2-6:2 FTSA (surr.)	1	%	66	75	85	78
13C2-8:2 FTSA (surr.)	1	%	102	94	98	84
13C2-10:2 FTSA (surr.)	1	%	102	95	93	86
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 324_16_25_SS _Duplicate_EU F	SX_OB_20220 324_20_06_SS _Primary_EUF	SX_OB_20220 325_00_16_SS _Primary_EUF	SX_OB_20220 325_04_07_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma53716	M22-Ma53717	M22-Ma53718	M22-Ma53719
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 25, 2022	Mar 25, 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_OB_20220 324_16_25_SS Duplicate_EU F	SX_OB_20220 324_20_06_SS Primary_EUF	SX_OB_20220 325_00_16_SS Primary_EUF	SX_OB_20220 325_04_07_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma53716	M22-Ma53717	M22-Ma53718	M22-Ma53719
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 25, 2022	Mar 25, 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-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_OB_20220 324_16_25_SS Duplicate_EU F	SX_OB_20220 324_20_06_SS _Primary_EUF	SX_OB_20220 325_00_16_SS _Primary_EUF	SX_OB_20220 325_04_07_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma53716	M22-Ma53717	M22-Ma53718	M22-Ma53719
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 25, 2022	Mar 25, 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	%	73	62	67	69
Toluene-d8 (surr.)	1	%	72	62	64	70
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	%	136	111	83	85
p-Terphenyl-d14 (surr.)	1	%	71	61	63	62

Client Sample ID			SX_OB_20220 324_16_25_SS Duplicate_EU F	SX_OB_20220 324_20_06_SS Primary_EUF	SX_OB_20220 325_00_16_SS Primary_EUF	SX_OB_20220 325_04_07_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma53716	M22-Ma53717	M22-Ma53718	M22-Ma53719
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 25, 2022	Mar 25, 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	%	102	76	94	110
Tetrachloro-m-xylene (surr.)	1	%	68	93	55	60
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	%	102	76	94	110
Tetrachloro-m-xylene (surr.)	1	%	68	93	55	60
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_OB_20220 324_16_25_SS Duplicate_EU F	SX_OB_20220 324_20_06_SS Primary_EUF	SX_OB_20220 325_00_16_SS Primary_EUF	SX_OB_20220 325_04_07_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma53716	M22-Ma53717	M22-Ma53718	M22-Ma53719
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 25, 2022	Mar 25, 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	%	35	42	36	46
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	< 100	530	< 100
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	7.4	8.3	8.7	8.2
% Moisture	1	%	25	31	28	27
Heavy Metals						
Arsenic	2	mg/kg	29	62	46	32
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	130	140	140	120
Copper	5	mg/kg	61	85	61	59
Lead	5	mg/kg	< 5	6.0	< 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	210	240	180	190
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	120	150	130	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 (PFTrDA) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	119	119	121	122
13C5-PFPeA (surr.)	1	%	70	74	78	73
13C5-PFHxA (surr.)	1	%	72	72	80	72

Client Sample ID			SX_OB_20220 324_16_25_SS Duplicate_EU F	SX_OB_20220 324_20_06_SS Primary_EUF	SX_OB_20220 325_00_16_SS Primary_EUF	SX_OB_20220 325_04_07_SS Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma53716	M22-Ma53717	M22-Ma53718	M22-Ma53719
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 25, 2022	Mar 25, 2022
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	73	76	82	76
13C8-PFOA (surr.)	1	%	75	65	78	70
13C5-PFNA (surr.)	1	%	69	69	75	71
13C6-PFDA (surr.)	1	%	69	64	59	54
13C2-PFUnDA (surr.)	1	%	88	90	82	88
13C2-PFDoDA (surr.)	1	%	81	74	82	83
13C2-PFTeDA (surr.)	1	%	88	88	81	85
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	%	97	92	98	95
D3-N-MeFOSA (surr.)	1	%	81	79	79	76
D5-N-EtFOSA (surr.)	1	%	83	83	85	83
D7-N-MeFOSE (surr.)	1	%	76	76	71	70
D9-N-EtFOSE (surr.)	1	%	59	59	59	62
D5-N-EtFOSAA (surr.)	1	%	83	81	89	95
D3-N-MeFOSAA (surr.)	1	%	88	79	90	85
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	%	89	83	91	82
18O2-PFHxS (surr.)	1	%	90	91	84	104
13C8-PFOS (surr.)	1	%	71	71	55	74
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	%	126	124	118	126
13C2-6:2 FTSA (surr.)	1	%	70	78	76	81

Client Sample ID			SX_OB_20220 324_16_25_SS Duplicate_EU F	SX_OB_20220 324_20_06_SS _Primary_EUF	SX_OB_20220 325_00_16_SS _Primary_EUF	SX_OB_20220 325_04_07_SS _Primary_EUF
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M22-Ma53716	M22-Ma53717	M22-Ma53718	M22-Ma53719
Date Sampled			Mar 24, 2022	Mar 24, 2022	Mar 25, 2022	Mar 25, 2022
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
13C2-8:2 FTSA (surr.)	1	%	89	103	96	98
13C2-10:2 FTSA (surr.)	1	%	108	96	101	99
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	Mar 28, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Mar 28, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Mar 28, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	Mar 28, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	Mar 28, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 28, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	Mar 28, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	Mar 28, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 28, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 28, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	Mar 28, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	Mar 29, 2022	14 Days
Fluoride (Total) - Method: LTM-INO-4150 Determination of Total Fluoride PART B – ISE - Method: LTM-INO-4150 Determination of Total Fluoride PART A – CIC	Melbourne	Mar 29, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Mar 28, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS - Method:	Melbourne	Mar 28, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Mar 25, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 25, 2022	

ABN: 50 005 085 521
Melbourne
 6 Monterey Road
 Dandenong South VIC 3175
 Phone : +61 3 8564 5000
 NATA # 1261 Site # 1254

Sydney
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 Lane Cove West 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

ABN: 01 06 0150 898
Perth
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 Welshpool WA 6106
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Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 25, 2022 2:30 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	874462	Due:	Apr 1, 2022
Project Name:	20220325043216-Eurofin-13	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	David Lawson

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoralkyl Substances (PFASs)	IWRG 621 WGTTP 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_20220324_16_24_S_S_Primary_EU_F	Mar 24, 2022	4:24PM	Soil	M22-Ma53712		X	X	X
2	SX_OB_20220324_12_27_S_S_Primary_EU_F	Mar 24, 2022	12:27PM	Soil	M22-Ma53713		X	X	X
3	SX_OB_20220324_08_18_S_S_Primary_EU_F	Mar 24, 2022	8:18AM	Soil	M22-Ma53714		X	X	X

ABN: 50 006 086 521
Melbourne
 6 Monterey Road
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 NATA # 1261 Site # 1254

Sydney
 Unit F3, Building F
 16 Mars Road
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 Phone : +61 2 9900 8400
 NATA # 1261 Site # 18217

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 4/52 Industrial Drive
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 NATA # 2377 Site # 2370

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Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 25, 2022 2:30 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	874462	Due:	Apr 1, 2022
Project Name:	20220325043216-Eurofin-13	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	David Lawson

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoralkyl Substances (PFASs)	IWRG 621 WGTTP 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_20220324_08_13_S_S_Triplicate_EUF	Mar 24, 2022	8:13AM	Soil	M22-Ma53715		X	X	X
5	SX_OB_20220324_16_25_S_S_Duplicate_EUF	Mar 24, 2022	4:25PM	Soil	M22-Ma53716		X	X	X
6	SX_OB_20220324_20_06_S_S_Primary_EUF	Mar 24, 2022	8:05PM	Soil	M22-Ma53717		X	X	X
7	SX_OB_20220325_00_16_S	Mar 25, 2022	12:16AM	Soil	M22-Ma53718		X	X	X

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

Project Name: 20220325043216-Eurofin-13
Project ID: JC0927

Order No.:
Report #: 874462
Phone: 08 8338 1009
Fax:

Received: Mar 25, 2022 2:30 PM
Due: Apr 1, 2022
Priority: 5 Day
Contact Name: David Lawson

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoralkyl Substances (PFASs)	WRG 621 WGT/PT 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_20220 325_04_07_S S_Primary_EU F	Mar 25, 2022	4:07PM	Soil	M22-Ma53719		X	X	X
9	SX_OB_20220 324_16_24_S S_Primary_EU F	Mar 24, 2022	4:24PM	AUS Leachate - pH 5.0	M22-Ma53720	X		X	
10	SX_OB_20220 324_12_27_S S_Primary_EU F	Mar 24, 2022	12:27PM	AUS Leachate - pH 5.0	M22-Ma53721	X		X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 25, 2022 2:30 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	874462	Due:	Apr 1, 2022
Project Name:	20220325043216-Eurofin-13	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	David Lawson

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoralkyl Substances (PFASs)	WRG 621 WGTPE 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_20220324_08_18_S_S_Primary_EU_F	Mar 24, 2022	8:18AM	AUS Leachate - pH 5.0	M22-Ma53722	X		X	
12	SX_OB_20220324_08_13_S_S_Triplicate_EUF	Mar 24, 2022	8:13AM	AUS Leachate - pH 5.0	M22-Ma53723	X		X	
13	SX_OB_20220324_16_25_S_S_Duplicate_EUF	Mar 24, 2022	4:25PM	AUS Leachate - pH 5.0	M22-Ma53724	X		X	
14	SX_OB_20220324_20_06_S	Mar 24, 2022	8:05PM	AUS Leachate - pH 5.0	M22-Ma53725	X		X	

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

Project Name: 20220325043216-Eurofin-13
Project ID: JC0927

Order No.:
Report #: 874462
Phone: 08 8338 1009
Fax:

Received: Mar 25, 2022 2:30 PM
Due: Apr 1, 2022
Priority: 5 Day
Contact Name: David Lawson

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoralkyl Substances (PFASs)	WRG 621 WGT/PT 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								
15	SX_OB_20220 325_00_16_S S_Primary_EU F	Mar 25, 2022	12:16AM	AUS Leachate - pH 5.0	M22-Ma53726	X		X	
16	SX_OB_20220 325_04_07_S S_Primary_EU F	Mar 25, 2022	4:07PM	AUS Leachate - pH 5.0	M22-Ma53727	X		X	
17	SX_OB_20220 324_16_24_S S_Primary_EU F	Mar 24, 2022	4:24PM	AUS Leachate - Reagent Water	M22-Ma53728	X		X	

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Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoralkyl Substances (PFASs)	WRG 621 WGT/PS 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	SX_OB_20220324_12_27_S_S_Primary_EU_F	Mar 24, 2022	12:27PM	AUS Leachate - Reagent Water	M22-Ma53729	X		X	
19	SX_OB_20220324_08_18_S_S_Primary_EU_F	Mar 24, 2022	8:18AM	AUS Leachate - Reagent Water	M22-Ma53730	X		X	
20	SX_OB_20220324_08_13_S_S_Triplicate_EUF	Mar 24, 2022	8:13AM	AUS Leachate - Reagent Water	M22-Ma53731	X		X	
21	SX_OB_20220324_16_25_S	Mar 24, 2022	4:25PM	AUS Leachate - Reagent	M22-Ma53732	X		X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 25, 2022 2:30 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	874462	Due:	Apr 1, 2022
Project Name:	20220325043216-Eurofin-13	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	David Lawson

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoralkyl Substances (PFASs)	WRG 621 WGTTP 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_Duplicate_EUF			Water					
22	SX_OB_20220324_20_06_S_S_Primary_EUF	Mar 24, 2022	8:05PM	AUS Leachate - Reagent Water	M22-Ma53733	X		X	
23	SX_OB_20220325_00_16_S_S_Primary_EUF	Mar 25, 2022	12:16AM	AUS Leachate - Reagent Water	M22-Ma53734	X		X	
24	SX_OB_20220325_04_07_S_S_Primary_EUF	Mar 25, 2022	4:07PM	AUS Leachate - Reagent Water	M22-Ma53735	X		X	

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 25, 2022 2:30 PM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	874462	Due:	Apr 1, 2022
Project Name:	20220325043216-Eurofin-13	Phone:	08 8338 1009	Priority:	5 Day
Project ID:	JC0927	Fax:		Contact Name:	David Lawson

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail	AUS Leaching Procedure	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	WRG 621 WGTp Suite
Melbourne Laboratory - NATA # 1261 Site # 1254	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217				
Brisbane Laboratory - NATA # 1261 Site # 20794				
Mayfield Laboratory - NATA # 1261 Site # 25079				
Perth Laboratory - NATA # 2377 Site # 2370				
External Laboratory				
Test Counts	16	8	24	8

Internal Quality Control Review and Glossary

General

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

Holding Times

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

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA. If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

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

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

Units

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	Toxic Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

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

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

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

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Zinc	mg/kg	< 5		5	Pass	
Method Blank						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	ug/kg	< 5		5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5		5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5		5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5		5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5		5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5		5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5		5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5		5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5		5	Pass	
Perfluorotridecanoic acid (PFTriDA)	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	%	97		70-130	Pass	
TRH C10-C14	%	125		70-130	Pass	
Naphthalene	%	119		70-130	Pass	
TRH C6-C10	%	96		70-130	Pass	
TRH >C10-C16	%	130		70-130	Pass	
LCS - % Recovery						
Volatile Organics						
1.1-Dichloroethene	%	84		70-130	Pass	
1.1.1-Trichloroethane	%	90		70-130	Pass	
1.2-Dichloroethane	%	96		70-130	Pass	
Benzene	%	103		70-130	Pass	
Ethylbenzene	%	123		70-130	Pass	
m&p-Xylenes	%	115		70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Toluene	%	112			70-130	Pass	
Trichloroethene	%	98			70-130	Pass	
Xylenes - Total*	%	115			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	89			70-130	Pass	
Acenaphthylene	%	112			70-130	Pass	
Anthracene	%	98			70-130	Pass	
Benz(a)anthracene	%	83			70-130	Pass	
Benzo(a)pyrene	%	88			70-130	Pass	
Benzo(b&j)fluoranthene	%	89			70-130	Pass	
Benzo(g,h,i)perylene	%	87			70-130	Pass	
Benzo(k)fluoranthene	%	93			70-130	Pass	
Chrysene	%	91			70-130	Pass	
Dibenz(a,h)anthracene	%	80			70-130	Pass	
Fluoranthene	%	83			70-130	Pass	
Fluorene	%	105			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	86			70-130	Pass	
Naphthalene	%	91			70-130	Pass	
Phenanthrene	%	95			70-130	Pass	
Pyrene	%	84			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	88			70-130	Pass	
4,4'-DDD	%	99			70-130	Pass	
4,4'-DDE	%	89			70-130	Pass	
4,4'-DDT	%	99			70-130	Pass	
a-HCH	%	127			70-130	Pass	
Aldrin	%	84			70-130	Pass	
b-HCH	%	99			70-130	Pass	
d-HCH	%	99			70-130	Pass	
Dieldrin	%	86			70-130	Pass	
Endosulfan I	%	92			70-130	Pass	
Endosulfan II	%	87			70-130	Pass	
Endosulfan sulphate	%	95			70-130	Pass	
Endrin	%	88			70-130	Pass	
Endrin aldehyde	%	123			70-130	Pass	
Endrin ketone	%	84			70-130	Pass	
g-HCH (Lindane)	%	110			70-130	Pass	
Heptachlor	%	105			70-130	Pass	
Heptachlor epoxide	%	91			70-130	Pass	
Hexachlorobenzene	%	101			70-130	Pass	
Methoxychlor	%	109			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	123			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	72			25-140	Pass	
2,4-Dichlorophenol	%	106			25-140	Pass	
2,4,5-Trichlorophenol	%	97			25-140	Pass	
2,4,6-Trichlorophenol	%	88			25-140	Pass	
2,6-Dichlorophenol	%	49			25-140	Pass	
4-Chloro-3-methylphenol	%	87			25-140	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Pentachlorophenol	%	77		25-140	Pass	
Tetrachlorophenols - Total	%	48		25-140	Pass	
LCS - % Recovery						
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	%	88		25-140	Pass	
2-Methyl-4,6-dinitrophenol	%	90		25-140	Pass	
2-Nitrophenol	%	101		25-140	Pass	
2,4-Dimethylphenol	%	70		25-140	Pass	
2,4-Dinitrophenol	%	127		25-140	Pass	
2-Methylphenol (o-Cresol)	%	100		25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	105		25-140	Pass	
4-Nitrophenol	%	83		25-140	Pass	
Dinoseb	%	101		25-140	Pass	
Phenol	%	98		25-140	Pass	
LCS - % Recovery						
Chromium (hexavalent)	%	102		70-130	Pass	
Cyanide (total)	%	102		70-130	Pass	
Fluoride (Total)	%	82		70-130	Pass	
LCS - % Recovery						
Heavy Metals						
Arsenic	%	87		80-120	Pass	
Cadmium	%	99		80-120	Pass	
Chromium	%	86		80-120	Pass	
Copper	%	89		80-120	Pass	
Lead	%	101		80-120	Pass	
Mercury	%	104		80-120	Pass	
Molybdenum	%	87		80-120	Pass	
Nickel	%	80		80-120	Pass	
Selenium	%	90		80-120	Pass	
Silver	%	104		80-120	Pass	
Tin	%	91		80-120	Pass	
Zinc	%	102		80-120	Pass	
LCS - % Recovery						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	%	97		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	74		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	75		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	74		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	91		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	70		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	67		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	65		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	69		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	64		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	73		50-150	Pass	
LCS - % Recovery						
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)	%	71		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	68		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	71		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	78		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	79		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	56		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	57		50-150	Pass	

Test			Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery								
Perfluoroalkyl sulfonic acids (PFASs)								
Perfluorobutanesulfonic acid (PFBS)			%	65		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)			%	97		50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)			%	88		50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)			%	73		50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)			%	66		50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)			%	79		50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)			%	77		50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)			%	103		50-150	Pass	
LCS - % Recovery								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)			%	85		50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)			%	84		50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)			%	84		50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)			%	87		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-Ma56394	NCP	%	125		70-130	Pass	
TRH >C10-C16	M22-Ma56394	NCP	%	121		70-130	Pass	
Spike - % Recovery								
Volatile Organics				Result 1				
1.1-Dichloroethene	M22-Ma53249	NCP	%	87		70-130	Pass	
1.1.1-Trichloroethane	M22-Ma53249	NCP	%	98		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	M22-Ma53305	NCP	%	72		70-130	Pass	
Acenaphthylene	M22-Ma53305	NCP	%	82		70-130	Pass	
Anthracene	M22-Ma53305	NCP	%	82		70-130	Pass	
Benz(a)anthracene	M22-Ma53305	NCP	%	73		70-130	Pass	
Benzo(a)pyrene	M22-Ma53305	NCP	%	89		70-130	Pass	
Benzo(b&j)fluoranthene	M22-Ma53305	NCP	%	94		70-130	Pass	
Benzo(g,h,i)perylene	M22-Ma53305	NCP	%	83		70-130	Pass	
Benzo(k)fluoranthene	M22-Ma53305	NCP	%	126		70-130	Pass	
Chrysene	M22-Ma53305	NCP	%	76		70-130	Pass	
Dibenz(a,h)anthracene	M22-Ma53305	NCP	%	86		70-130	Pass	
Fluoranthene	M22-Ma53305	NCP	%	97		70-130	Pass	
Fluorene	M22-Ma53305	NCP	%	82		70-130	Pass	
Indeno(1.2.3-cd)pyrene	M22-Ma53305	NCP	%	82		70-130	Pass	
Naphthalene	M22-Ma53305	NCP	%	75		70-130	Pass	
Phenanthrene	M22-Ma53305	NCP	%	86		70-130	Pass	
Pyrene	M22-Ma53305	NCP	%	93		70-130	Pass	
Spike - % Recovery								
Phenols (Halogenated)				Result 1				
2-Chlorophenol	M22-Ma52913	NCP	%	127		30-130	Pass	
2.4-Dichlorophenol	M22-Ma53305	NCP	%	65		30-130	Pass	
2.4.5-Trichlorophenol	M22-Ma53305	NCP	%	58		30-130	Pass	
2.4.6-Trichlorophenol	M22-Ma53305	NCP	%	57		30-130	Pass	
2.6-Dichlorophenol	M22-Ma53305	NCP	%	60		30-130	Pass	
4-Chloro-3-methylphenol	M22-Ma52913	NCP	%	54		30-130	Pass	
Pentachlorophenol	M22-Ma52913	NCP	%	63		30-130	Pass	
Tetrachlorophenols - Total	M22-Ma53305	NCP	%	48		30-130	Pass	
Spike - % Recovery								

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Phenols (non-Halogenated)				Result 1				
2-Cyclohexyl-4,6-dinitrophenol	M22-Ma47802	NCP	%	100		30-130	Pass	
2-Methyl-4,6-dinitrophenol	M22-Ma47802	NCP	%	66		30-130	Pass	
2-Nitrophenol	M22-Ma53305	NCP	%	64		30-130	Pass	
2,4-Dimethylphenol	M22-Ma53305	NCP	%	74		30-130	Pass	
2,4-Dinitrophenol	M22-Ma47802	NCP	%	57		30-130	Pass	
2-Methylphenol (o-Cresol)	M22-Ma53305	NCP	%	53		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-Ma53305	NCP	%	66		30-130	Pass	
4-Nitrophenol	M22-Ma52913	NCP	%	34		30-130	Pass	
Dinoseb	M22-Ma53305	NCP	%	30		30-130	Pass	
Phenol	M22-Ma52913	NCP	%	116		30-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	M22-Ma55702	NCP	%	110		75-125	Pass	
Cadmium	M22-Ma55702	NCP	%	104		75-125	Pass	
Chromium	M22-Ma55702	NCP	%	104		75-125	Pass	
Copper	M22-Ma55702	NCP	%	114		75-125	Pass	
Lead	M22-Ma60390	NCP	%	101		75-125	Pass	
Mercury	M22-Ma55702	NCP	%	124		75-125	Pass	
Molybdenum	M22-Ma55702	NCP	%	109		75-125	Pass	
Nickel	M22-Ma55702	NCP	%	104		75-125	Pass	
Selenium	M22-Ma55702	NCP	%	107		75-125	Pass	
Silver	M22-Ma55702	NCP	%	110		75-125	Pass	
Tin	M22-Ma55702	NCP	%	99		75-125	Pass	
Zinc	M22-Ma55702	NCP	%	93		75-125	Pass	
Spike - % Recovery								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1				
Perfluorobutanoic acid (PFBA)	M22-Ma53712	CP	%	89		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma53712	CP	%	95		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma53712	CP	%	89		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma53712	CP	%	81		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma53712	CP	%	102		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma53712	CP	%	90		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma53712	CP	%	94		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma53712	CP	%	100		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma53712	CP	%	93		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ma53712	CP	%	67		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma53712	CP	%	88		50-150	Pass	
Spike - % Recovery								
Perfluoroalkyl sulfonamido substances				Result 1				
Perfluorooctane sulfonamide (FOSA)	M22-Ma53712	CP	%	89		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma53712	CP	%	90		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma53712	CP	%	92		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma53712	CP	%	105		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma53712	CP	%	113		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma53712	CP	%	71		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma53712	CP	%	79		50-150	Pass	
Spike - % Recovery								
Perfluoroalkyl sulfonic acids (PFSA's)				Result 1				
Perfluorobutanesulfonic acid (PFBS)	M22-Ma53712	CP	%	81		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ma53712	CP	%	123		50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma53712	CP	%	117		50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma53712	CP	%	100		50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma53712	CP	%	93		50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma53712	CP	%	83		50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M22-Ma53712	CP	%	76		50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ma53712	CP	%	127		50-150	Pass	
Spike - % Recovery								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)				Result 1				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M22-Ma53712	CP	%	92		50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma53712	CP	%	118		50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma53712	CP	%	104		50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma53712	CP	%	103		50-150	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons				Result 1				
TRH C6-C9	M22-Ma53713	CP	%	82		70-130	Pass	
Naphthalene	M22-Ma53713	CP	%	101		70-130	Pass	
TRH C6-C10	M22-Ma53713	CP	%	81		70-130	Pass	
Spike - % Recovery								
Volatile Organics				Result 1				
1,2-Dichloroethane	M22-Ma53713	CP	%	70		70-130	Pass	
Benzene	M22-Ma53713	CP	%	75		70-130	Pass	
Ethylbenzene	M22-Ma53713	CP	%	95		70-130	Pass	
m&p-Xylenes	M22-Ma53713	CP	%	98		70-130	Pass	
o-Xylene	M22-Ma53713	CP	%	101		70-130	Pass	
Toluene	M22-Ma53713	CP	%	87		70-130	Pass	
Trichloroethene	M22-Ma53713	CP	%	83		70-130	Pass	
Xylenes - Total*	M22-Ma53713	CP	%	99		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	M22-Ma53713	CP	%	97		70-130	Pass	
4,4'-DDD	M22-Ma53713	CP	%	88		70-130	Pass	
4,4'-DDE	M22-Ma53713	CP	%	101		70-130	Pass	
4,4'-DDT	M22-Ma53713	CP	%	76		70-130	Pass	
a-HCH	M22-Ma53713	CP	%	91		70-130	Pass	
Aldrin	M22-Ma53713	CP	%	93		70-130	Pass	
b-HCH	M22-Ma53713	CP	%	123		70-130	Pass	
d-HCH	M22-Ma53713	CP	%	85		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dieldrin	M22-Ma53713	CP	%	97			70-130	Pass	
Endosulfan I	M22-Ma53713	CP	%	103			70-130	Pass	
Endosulfan II	M22-Ma53713	CP	%	89			70-130	Pass	
Endosulfan sulphate	M22-Ma53713	CP	%	88			70-130	Pass	
Endrin	M22-Ma53713	CP	%	96			70-130	Pass	
Endrin aldehyde	M22-Ma53713	CP	%	88			70-130	Pass	
Endrin ketone	M22-Ma53713	CP	%	96			70-130	Pass	
g-HCH (Lindane)	M22-Ma53713	CP	%	107			70-130	Pass	
Heptachlor	M22-Ma53713	CP	%	88			70-130	Pass	
Heptachlor epoxide	M22-Ma53713	CP	%	100			70-130	Pass	
Hexachlorobenzene	M22-Ma53713	CP	%	103			70-130	Pass	
Methoxychlor	M22-Ma53713	CP	%	73			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	M22-Ma53713	CP	%	101			70-130	Pass	
Aroclor-1260	M22-Ma53713	CP	%	105			70-130	Pass	
Spike - % Recovery									
				Result 1					
Cyanide (total)	M22-Ma53713	CP	%	120			70-130	Pass	
Spike - % Recovery									
				Result 1					
Fluoride (Total)	M22-Ma53719	CP	%	87			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-Ma53712	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M22-Ma53712	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M22-Ma53712	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M22-Ma53712	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Naphthalene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M22-Ma53712	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M22-Ma53712	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M22-Ma53712	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M22-Ma53712	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Hexachlorobutadiene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.3.5-Trimethylbenzene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.4-Dichlorobenzene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzene	M22-Ma53712	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Bromobenzene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	M22-Ma53712	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	M22-Ma53712	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	M22-Ma53712	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	M22-Ma53712	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1.2-Dichloroethene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.3-Dichloropropene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total*	M22-Ma53712	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Naphthalene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M22-Ma53712	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4.4'-DDD	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4.4'-DDE	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4.4'-DDT	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-Ma53712	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M22-Ma53712	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-Ma53712	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-Ma53712	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-Ma53712	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-Ma53712	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-Ma53712	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-Ma53712	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-Ma53712	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4-Dichlorophenol	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4.5-Trichlorophenol	M22-Ma53712	CP	mg/kg	< 1	< 1	<1	30%	Pass
2.4.6-Trichlorophenol	M22-Ma53712	CP	mg/kg	< 1	< 1	<1	30%	Pass
2.6-Dichlorophenol	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-Ma53712	CP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-Ma53712	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-Ma53712	CP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4.6-dinitrophenol	M22-Ma53712	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4.6-dinitrophenol	M22-Ma53712	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-Ma53712	CP	mg/kg	< 1	< 1	<1	30%	Pass
2.4-Dimethylphenol	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4-Dinitrophenol	M22-Ma53712	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-Ma53712	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass

Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
3&4-Methylphenol (m&p-Cresol)	M22-Ma53712	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	M22-Ma53712	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	M22-Ma53712	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	M22-Ma53712	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Cyanide (total)	M22-Ma53712	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Fluoride (Total)	M22-Ma56138	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
% Moisture	M22-Ma53712	CP	%	24	26	10	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M22-Ma53712	CP	mg/kg	31	20	42	30%	Fail	Q15
Cadmium	M22-Ma53712	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M22-Ma53712	CP	mg/kg	140	110	18	30%	Pass	
Copper	M22-Ma53712	CP	mg/kg	70	53	27	30%	Pass	
Lead	M22-Ma53712	CP	mg/kg	5.1	< 5	32	30%	Fail	Q15
Mercury	M22-Ma53712	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M22-Ma53712	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M22-Ma53712	CP	mg/kg	250	190	28	30%	Pass	
Selenium	M22-Ma53712	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M22-Ma53712	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Tin	M22-Ma53712	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M22-Ma53712	CP	mg/kg	120	97	25	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma55405	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma55405	NCP	ug/kg	< 10	< 10	<1	30%	Pass	

Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma55405	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-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma55405	NCP	ug/kg	< 10	< 10	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	M22-Ma53714	CP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Ma53715	CP	pH Units	9.1	9.1	pass	30%	Pass

Comments

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised by:

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



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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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 **874677-L**
Project name **20220326052828-Eurofin-14**
Project ID **JC0927**
Received Date **Mar 26, 2022**

Client Sample ID			SX_OB_20220 325_08_18_SS _Primary_EUF	SX_OB_20220 325_08_30_SS _Triuplicate_EU F	SX_OB_20220 325_08_18_SS _Primary_EUF	SX_OB_20220 325_08_30_SS _Triuplicate_EU F
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-Ma55371	M22-Ma55372	M22-Ma55373	M22-Ma55374
Date Sampled			Mar 25, 2022	Mar 25, 2022	Mar 25, 2022	Mar 25, 2022
Test/Reference	LOR	Unit				
AUS Leaching Procedure						
Leachate Fluid ^{CO1}		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	5.0	5.0	6.9	6.9
pH (off)	0.1	pH Units	5.1	5.1	8.4	8.9
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	91	71	90
13C5-PFPeA (surr.)	1	%	91	93	77	89
13C5-PFHxA (surr.)	1	%	80	81	72	81
13C4-PFHpA (surr.)	1	%	90	96	83	93
13C8-PFOA (surr.)	1	%	55	71	53	60
13C5-PFNA (surr.)	1	%	99	104	99	99
13C6-PFDA (surr.)	1	%	70	83	83	90
13C2-PFUnDA (surr.)	1	%	58	73	79	82
13C2-PFDoDA (surr.)	1	%	46	63	75	73
13C2-PFTTeDA (surr.)	1	%	14	25	39	24

Client Sample ID			SX_OB_20220 325_08_18_SS _Primary_EUF	SX_OB_20220 325_08_30_SS TriPLICATE_EU F	SX_OB_20220 325_08_18_SS _Primary_EUF	SX_OB_20220 325_08_30_SS TriPLICATE_EU F
Sample Matrix			AUS Leachate - pH 5.0	AUS Leachate - pH 5.0	AUS Leachate - Reagent Water	AUS Leachate - Reagent Water
Eurofins Sample No.			M22-Ma55371	M22-Ma55372	M22-Ma55373	M22-Ma55374
Date Sampled			Mar 25, 2022	Mar 25, 2022	Mar 25, 2022	Mar 25, 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	%	80	95	84	84
D3-N-MeFOSA (surr.)	1	%	51	72	72	47
D5-N-EtFOSA (surr.)	1	%	47	67	67	42
D7-N-MeFOSE (surr.)	1	%	63	73	58	56
D9-N-EtFOSE (surr.)	1	%	64	73	60	59
D5-N-EtFOSAA (surr.)	1	%	26	38	50	53
D3-N-MeFOSAA (surr.)	1	%	27	38	47	47
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	%	25	24	22	25
18O2-PFHxS (surr.)	1	%	86	94	79	90
13C8-PFOS (surr.)	1	%	80	95	79	90
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	%	124	122	102	118
13C2-6:2 FTSA (surr.)	1	%	81	88	84	82
13C2-8:2 FTSA (surr.)	1	%	83	76	91	77
13C2-10:2 FTSA (surr.)	1	%	69	82	94	91
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	Mar 28, 2022	0 Days
pH (Leachate fluid) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Mar 28, 2022	0 Days
pH (off) - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Melbourne	Mar 28, 2022	0 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 26, 2022	

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 6 Monterey Road
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Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 26, 2022 9:40 AM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	874677	Due:	Apr 4, 2022
Project Name:	20220326052828-Eurofin-14	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 Polyfluoralkyl Substances (PFASs)	IWRG 621 WGTTP 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_20220325_08_18_S_S_Primary_EU_F	Mar 25, 2022	8:18AM	Soil	M22-Ma55369		X	X	X
2	SX_OB_20220325_08_30_S_S_Triplicate_EUF	Mar 25, 2022	8:30AM	Soil	M22-Ma55370		X	X	X
3	SX_OB_20220325_08_18_S_S_Primary_EU_F	Mar 25, 2022	8:18AM	AUS Leachate - pH 5.0	M22-Ma55371	X		X	

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NATA # 1261 Site # 25079

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NATA # 2377 Site # 2370

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IANZ # 1290

Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 26, 2022 9:40 AM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	874677	Due:	Apr 4, 2022
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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 Polyfluoralkyl 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_20220325_08_30_S_S_Triplicate_EUF	Mar 25, 2022	8:30AM	AUS Leachate - pH 5.0	M22-Ma55372	X		X	
5	SX_OB_20220325_08_18_S_S_Primary_EUF	Mar 25, 2022	8:18AM	AUS Leachate - Reagent Water	M22-Ma55373	X		X	
6	SX_OB_20220325_08_30_S_S_Triplicate_EUF	Mar 25, 2022	8:30AM	AUS Leachate - Reagent Water	M22-Ma55374	X		X	
Test Counts						4	2	6	2

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	Toxic 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 (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluoronanesulfonic 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)	%	128			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	97			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	95			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	94			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	96			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	98			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	102			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	101			50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	94			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	102			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code		
LCS - % Recovery									
Perfluoroalkyl sulfonamido substances									
Perfluorooctane sulfonamide (FOSA)	%	94			50-150	Pass			
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	101			50-150	Pass			
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	97			50-150	Pass			
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	95			50-150	Pass			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	98			50-150	Pass			
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	90			50-150	Pass			
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	75			50-150	Pass			
LCS - % Recovery									
Perfluoroalkyl sulfonic acids (PFSA's)									
Perfluorobutanesulfonic acid (PFBS)	%	81			50-150	Pass			
Perfluorononanesulfonic acid (PFNS)	%	100			50-150	Pass			
Perfluoropropanesulfonic acid (PFPrS)	%	104			50-150	Pass			
Perfluoropentanesulfonic acid (PFPeS)	%	84			50-150	Pass			
Perfluorohexanesulfonic acid (PFHxS)	%	85			50-150	Pass			
Perfluoroheptanesulfonic acid (PFHpS)	%	93			50-150	Pass			
Perfluorooctanesulfonic acid (PFOS)	%	98			50-150	Pass			
Perfluorodecanesulfonic acid (PFDS)	%	95			50-150	Pass			
LCS - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSA's)									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	99			50-150	Pass			
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	111			50-150	Pass			
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	112			50-150	Pass			
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	88			50-150	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)									
Perfluorobutanoic acid (PFBA)	M22-Ma53729	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma53729	NCP	ug/L	< 0.01	0.01	30	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances									
Perfluorooctane sulfonamide (FOSA)	M22-Ma53729	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma53729	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma53729	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma53729	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma53729	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-Ma53729	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma53729	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma53729	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-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma53729	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma53729	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma53729	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	Yes
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
Mary Makarios	Senior Analyst (NSW)
Joseph Edouard	Senior Analyst (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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NATA Accredited
Accreditation Number 1261
Site Number 1254

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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 **874677-S**
Project name **20220326052828-Eurofin-14**
Project ID **JC0927**
Received Date **Mar 26, 2022**

Client Sample ID			SX_OB_20220 325_08_18_SS _Primary_EUF	SX_OB_20220 325_08_30_SS _Triplicate_EU F
Sample Matrix			Soil	Soil
Eurofins Sample No.			M22-Ma55369	M22-Ma55370
Date Sampled			Mar 25, 2022	Mar 25, 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
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

Client Sample ID			SX_OB_20220 325_08_18_SS _Primary_EUF	SX_OB_20220 325_08_30_SS TriPLICATE_EU F
Sample Matrix			Soil	Soil
Eurofins Sample No.			M22-Ma55369	M22-Ma55370
Date Sampled			Mar 25, 2022	Mar 25, 2022
Test/Reference	LOR	Unit		
Volatile Organics				
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	%	68	69
Toluene-d8 (surr.)	1	%	69	75
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

Client Sample ID			SX_OB_20220 325_08_18_SS _Primary_EUF	SX_OB_20220 325_08_30_SS TriPLICATE_EU F
Sample Matrix			Soil	Soil
Eurofins Sample No.			M22-Ma55369	M22-Ma55370
Date Sampled			Mar 25, 2022	Mar 25, 2022
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
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	%	142	141
p-Terphenyl-d14 (surr.)	1	%	56	55
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
Dibutylchloroendate (surr.)	1	%	123	125
Tetrachloro-m-xylene (surr.)	1	%	66	56

Client Sample ID			SX_OB_20220 325_08_18_SS _Primary_EUF	SX_OB_20220 325_08_30_SS TriPLICATE_EU F
Sample Matrix			Soil	Soil
Eurofins Sample No.			M22-Ma55369	M22-Ma55370
Date Sampled			Mar 25, 2022	Mar 25, 2022
Test/Reference	LOR	Unit		
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
Dibutylchloroendate (surr.)	1	%	123	125
Tetrachloro-m-xylene (surr.)	1	%	66	56
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	%	54	58
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	8.1	8.4
% Moisture	1	%	26	27
Heavy Metals				
Arsenic	2	mg/kg	34	33
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	130	130
Copper	5	mg/kg	69	64
Lead	5	mg/kg	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1

Client Sample ID			SX_OB_20220 325_08_18_SS _Primary_EUF	SX_OB_20220 325_08_30_SS TriPLICATE_EU F
Sample Matrix			Soil	Soil
Eurofins Sample No.			M22-Ma55369	M22-Ma55370
Date Sampled			Mar 25, 2022	Mar 25, 2022
Test/Reference	LOR	Unit		
Heavy Metals				
Molybdenum	5	mg/kg	< 5	< 5
Nickel	5	mg/kg	220	210
Selenium	2	mg/kg	< 2	< 2
Silver	2	mg/kg	< 2	< 2
Tin	10	mg/kg	< 10	< 10
Zinc	5	mg/kg	120	120
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	%	138	138
13C5-PFPeA (surr.)	1	%	84	76
13C5-PFHxA (surr.)	1	%	74	71
13C4-PFHpA (surr.)	1	%	90	81
13C8-PFOA (surr.)	1	%	67	67
13C5-PFNA (surr.)	1	%	93	87
13C6-PFDA (surr.)	1	%	66	64
13C2-PFUnDA (surr.)	1	%	91	99
13C2-PFDoDA (surr.)	1	%	95	96
13C2-PFTeDA (surr.)	1	%	100	102
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	%	103	113
D3-N-MeFOSA (surr.)	1	%	83	85
D5-N-EtFOSA (surr.)	1	%	100	97
D7-N-MeFOSE (surr.)	1	%	83	84
D9-N-EtFOSE (surr.)	1	%	82	81
D5-N-EtFOSAA (surr.)	1	%	99	101
D3-N-MeFOSAA (surr.)	1	%	103	95

Client Sample ID			SX_OB_20220 325_08_18_SS _Primary_EUF	SX_OB_20220 325_08_30_SS TriPLICATE_EU F
Sample Matrix			Soil	Soil
Eurofins Sample No.			M22-Ma55369	M22-Ma55370
Date Sampled			Mar 25, 2022	Mar 25, 2022
Test/Reference	LOR	Unit		
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	%	87	85
18O2-PFHxS (surr.)	1	%	103	100
13C8-PFOS (surr.)	1	%	76	71
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	%	127	129
13C2-6:2 FTSA (surr.)	1	%	102	104
13C2-8:2 FTSA (surr.)	1	%	107	98
13C2-10:2 FTSA (surr.)	1	%	116	115
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	Mar 28, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Mar 28, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Mar 28, 2022	14 Days
Volatile Organics - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS	Melbourne	Mar 28, 2022	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	Mar 28, 2022	7 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 28, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	Mar 28, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	Mar 28, 2022	28 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 28, 2022	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Mar 28, 2022	14 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	Mar 28, 2022	28 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	Mar 29, 2022	14 Days
Fluoride (Total) - Method: LTM-INO-4150 Determination of Total Fluoride PART B – ISE	Melbourne	Mar 29, 2022	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Mar 28, 2022	7 Days
Metals IWRG 621 : Metals M12 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	Mar 28, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Mar 26, 2022	14 Days
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
Perfluoroalkyl sulfonamido substances - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
Perfluoroalkyl sulfonic acids (PFASs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 28, 2022	28 Days
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)	Melbourne	Mar 26, 2022	

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 6 Monterey Road
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Company Name:	Agon Environmental Pty Ltd - VIC	Order No.:		Received:	Mar 26, 2022 9:40 AM
Address:	3/224 Glen Osmond Road Fullarton SA 5063	Report #:	874677	Due:	Apr 4, 2022
Project Name:	20220326052828-Eurofin-14	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 Polyfluoralkyl Substances (PFASs)	IWRG 621 WGTTP 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_20220325_08_18_S_S_Primary_EU_F	Mar 25, 2022	8:18AM	Soil	M22-Ma55369		X	X	X
2	SX_OB_20220325_08_30_S_S_Triplicate_EUF	Mar 25, 2022	8:30AM	Soil	M22-Ma55370		X	X	X
3	SX_OB_20220325_08_18_S_S_Primary_EU_F	Mar 25, 2022	8:18AM	AUS Leachate - pH 5.0	M22-Ma55371	X		X	

ABN: 50 006 086 521
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Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						AUS Leaching Procedure	Moisture Set	Per- and Polyfluoralkyl 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_20220325_08_30_S_S_Triplicate_EUF	Mar 25, 2022	8:30AM	AUS Leachate - pH 5.0	M22-Ma55372	X		X	
5	SX_OB_20220325_08_18_S_S_Primary_EUF	Mar 25, 2022	8:18AM	AUS Leachate - Reagent Water	M22-Ma55373	X		X	
6	SX_OB_20220325_08_30_S_S_Triplicate_EUF	Mar 25, 2022	8:30AM	AUS Leachate - Reagent Water	M22-Ma55374	X		X	
Test Counts						4	2	6	2

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	Toxic Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

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

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

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

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Zinc	mg/kg	< 5		5	Pass	
Method Blank						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	ug/kg	< 5		5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5		5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5		5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5		5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5		5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5		5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5		5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5		5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5		5	Pass	
Perfluorotridecanoic acid (PFTriDA)	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	%	98		70-130	Pass	
TRH C10-C14	%	117		70-130	Pass	
Naphthalene	%	79		70-130	Pass	
TRH C6-C10	%	94		70-130	Pass	
TRH >C10-C16	%	119		70-130	Pass	
LCS - % Recovery						
Volatile Organics						
1.1-Dichloroethene	%	81		70-130	Pass	
1.1.1-Trichloroethane	%	86		70-130	Pass	
1.2-Dichlorobenzene	%	93		70-130	Pass	
1.2-Dichloroethane	%	103		70-130	Pass	
Benzene	%	97		70-130	Pass	
Ethylbenzene	%	95		70-130	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	97		70-130	Pass	
Toluene	%	98		70-130	Pass	
Trichloroethene	%	101		70-130	Pass	
Xylenes - Total*	%	98		70-130	Pass	
LCS - % Recovery						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	%	86		70-130	Pass	
Acenaphthylene	%	103		70-130	Pass	
Anthracene	%	98		70-130	Pass	
Benz(a)anthracene	%	89		70-130	Pass	
Benzo(a)pyrene	%	93		70-130	Pass	
Benzo(b&j)fluoranthene	%	103		70-130	Pass	
Benzo(g,h,i)perylene	%	86		70-130	Pass	
Benzo(k)fluoranthene	%	83		70-130	Pass	
Chrysene	%	97		70-130	Pass	
Dibenz(a,h)anthracene	%	94		70-130	Pass	
Fluoranthene	%	119		70-130	Pass	
Fluorene	%	99		70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	88		70-130	Pass	
Naphthalene	%	95		70-130	Pass	
Phenanthrene	%	101		70-130	Pass	
Pyrene	%	119		70-130	Pass	
LCS - % Recovery						
Organochlorine Pesticides						
Chlordanes - Total	%	109		70-130	Pass	
4,4'-DDD	%	81		70-130	Pass	
4,4'-DDE	%	101		70-130	Pass	
4,4'-DDT	%	75		70-130	Pass	
a-HCH	%	83		70-130	Pass	
Aldrin	%	87		70-130	Pass	
b-HCH	%	100		70-130	Pass	
d-HCH	%	108		70-130	Pass	
Dieldrin	%	123		70-130	Pass	
Endosulfan I	%	74		70-130	Pass	
Endosulfan II	%	85		70-130	Pass	
Endosulfan sulphate	%	97		70-130	Pass	
Endrin	%	103		70-130	Pass	
Endrin aldehyde	%	87		70-130	Pass	
Endrin ketone	%	123		70-130	Pass	
g-HCH (Lindane)	%	82		70-130	Pass	
Heptachlor	%	105		70-130	Pass	
Heptachlor epoxide	%	109		70-130	Pass	
Hexachlorobenzene	%	102		70-130	Pass	
Methoxychlor	%	74		70-130	Pass	
LCS - % Recovery						
Polychlorinated Biphenyls						
Aroclor-1260	%	71		70-130	Pass	
LCS - % Recovery						
Phenols (Halogenated)						
2-Chlorophenol	%	87		25-140	Pass	
2,4-Dichlorophenol	%	82		25-140	Pass	
2,4,5-Trichlorophenol	%	87		25-140	Pass	
2,4,6-Trichlorophenol	%	53		25-140	Pass	
2,6-Dichlorophenol	%	85		25-140	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
4-Chloro-3-methylphenol	%	75		25-140	Pass	
Pentachlorophenol	%	63		25-140	Pass	
Tetrachlorophenols - Total	%	80		25-140	Pass	
LCS - % Recovery						
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	%	34		25-140	Pass	
2-Methyl-4,6-dinitrophenol	%	39		25-140	Pass	
2-Nitrophenol	%	83		25-140	Pass	
2,4-Dimethylphenol	%	72		25-140	Pass	
2,4-Dinitrophenol	%	51		25-140	Pass	
2-Methylphenol (o-Cresol)	%	64		25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	70		25-140	Pass	
4-Nitrophenol	%	67		25-140	Pass	
Dinoseb	%	38		25-140	Pass	
Phenol	%	52		25-140	Pass	
LCS - % Recovery						
Chromium (hexavalent)	%	105		70-130	Pass	
Cyanide (total)	%	102		70-130	Pass	
Fluoride (Total)	%	82		70-130	Pass	
LCS - % Recovery						
Heavy Metals						
Arsenic	%	105		80-120	Pass	
Cadmium	%	98		80-120	Pass	
Chromium	%	109		80-120	Pass	
Copper	%	106		80-120	Pass	
Lead	%	111		80-120	Pass	
Mercury	%	107		80-120	Pass	
Molybdenum	%	104		80-120	Pass	
Nickel	%	101		80-120	Pass	
Selenium	%	106		80-120	Pass	
Silver	%	104		80-120	Pass	
Tin	%	103		80-120	Pass	
Zinc	%	106		80-120	Pass	
LCS - % Recovery						
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)	%	62		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	97		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	89		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	83		50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	107		50-150	Pass	
Perfluorononanoic acid (PFNA)	%	107		50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	95		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	102		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	84		50-150	Pass	
Perfluorotridecanoic acid (PFTTrDA)	%	79		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	92		50-150	Pass	
LCS - % Recovery						
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)	%	86		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	92		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	78		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	96		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	94		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	71		50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	83			50-150	Pass		
LCS - % Recovery								
Perfluoroalkyl sulfonic acids (PFASs)								
Perfluorobutanesulfonic acid (PFBS)	%	79			50-150	Pass		
Perfluorononanesulfonic acid (PFNS)	%	137			50-150	Pass		
Perfluoropropanesulfonic acid (PFPrS)	%	74			50-150	Pass		
Perfluoropentanesulfonic acid (PFPeS)	%	93			50-150	Pass		
Perfluorohexanesulfonic acid (PFHxS)	%	98			50-150	Pass		
Perfluoroheptanesulfonic acid (PFHpS)	%	108			50-150	Pass		
Perfluorooctanesulfonic acid (PFOS)	%	85			50-150	Pass		
Perfluorodecanesulfonic acid (PFDS)	%	130			50-150	Pass		
LCS - % Recovery								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)								
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	96			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)	%	99			50-150	Pass		
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	99			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-Ma61023	NCP	%	108		70-130	Pass	
TRH C10-C14	M22-Ma56076	NCP	%	90		70-130	Pass	
Naphthalene	M22-Ma61023	NCP	%	128		70-130	Pass	
TRH C6-C10	M22-Ma61023	NCP	%	104		70-130	Pass	
TRH >C10-C16	M22-Ma56076	NCP	%	91		70-130	Pass	
Spike - % Recovery								
Volatile Organics				Result 1				
1.1-Dichloroethene	M22-Ma61023	NCP	%	128		70-130	Pass	
1.1.1-Trichloroethane	M22-Ma61023	NCP	%	123		70-130	Pass	
1.2-Dichlorobenzene	M22-Ma61023	NCP	%	130		70-130	Pass	
1.2-Dichloroethane	M22-Ma61023	NCP	%	96		70-130	Pass	
Benzene	M22-Ma61023	NCP	%	130		70-130	Pass	
Ethylbenzene	M22-Ma61023	NCP	%	127		70-130	Pass	
m&p-Xylenes	M22-Ma61023	NCP	%	127		70-130	Pass	
o-Xylene	M22-Ma61023	NCP	%	133		70-130	Fail	Q08
Toluene	M22-Ma61023	NCP	%	129		70-130	Pass	
Trichloroethene	M22-Ma61023	NCP	%	121		70-130	Pass	
Xylenes - Total*	M22-Ma61023	NCP	%	129		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	M22-Ma55366	NCP	%	105		70-130	Pass	
Acenaphthylene	M22-Ma55366	NCP	%	117		70-130	Pass	
Anthracene	M22-Ma55366	NCP	%	100		70-130	Pass	
Benz(a)anthracene	M22-Ma55366	NCP	%	92		70-130	Pass	
Benzo(a)pyrene	M22-Ma55366	NCP	%	107		70-130	Pass	
Benzo(b&j)fluoranthene	M22-Ma55366	NCP	%	128		70-130	Pass	
Benzo(g,h,i)perylene	M22-Ma55366	NCP	%	71		70-130	Pass	
Benzo(k)fluoranthene	M22-Ma55366	NCP	%	103		70-130	Pass	
Chrysene	M22-Ma55366	NCP	%	111		70-130	Pass	
Dibenz(a,h)anthracene	M22-Ma55366	NCP	%	102		70-130	Pass	
Fluoranthene	M22-Ma55366	NCP	%	126		70-130	Pass	
Fluorene	M22-Ma55366	NCP	%	113		70-130	Pass	
Indeno(1.2.3-cd)pyrene	M22-Ma55366	NCP	%	97		70-130	Pass	
Naphthalene	M22-Ma55366	NCP	%	105		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Phenanthrene	M22-Ma55366	NCP	%	99		70-130	Pass	
Pyrene	M22-Ma55366	NCP	%	82		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	M22-Ma55406	NCP	%	113		70-130	Pass	
4.4'-DDD	M22-Ma55406	NCP	%	83		70-130	Pass	
4.4'-DDE	M22-Ma55406	NCP	%	92		70-130	Pass	
4.4'-DDT	M22-Ma55406	NCP	%	123		70-130	Pass	
a-HCH	M22-Ma55406	NCP	%	74		70-130	Pass	
Aldrin	M22-Ma55406	NCP	%	76		70-130	Pass	
b-HCH	M22-Ma55406	NCP	%	102		70-130	Pass	
d-HCH	M22-Ma55406	NCP	%	78		70-130	Pass	
Dieldrin	M22-Ma55406	NCP	%	77		70-130	Pass	
Endosulfan I	M22-Ma55406	NCP	%	94		70-130	Pass	
Endosulfan II	M22-Ma55406	NCP	%	74		70-130	Pass	
Endosulfan sulphate	M22-Ma55406	NCP	%	82		70-130	Pass	
Endrin	M22-Ma55406	NCP	%	86		70-130	Pass	
Endrin aldehyde	M22-Ma55406	NCP	%	83		70-130	Pass	
Endrin ketone	M22-Ma55406	NCP	%	90		70-130	Pass	
g-HCH (Lindane)	M22-Ma55406	NCP	%	80		70-130	Pass	
Heptachlor	M22-Ma55406	NCP	%	80		70-130	Pass	
Heptachlor epoxide	M22-Ma55406	NCP	%	97		70-130	Pass	
Hexachlorobenzene	M22-Ma55406	NCP	%	85		70-130	Pass	
Methoxychlor	M22-Ma55406	NCP	%	85		70-130	Pass	
Spike - % Recovery								
Phenols (Halogenated)				Result 1				
2-Chlorophenol	M22-Ma55366	NCP	%	94		30-130	Pass	
2.4-Dichlorophenol	M22-Ma55366	NCP	%	98		30-130	Pass	
2.4.5-Trichlorophenol	M22-Ma55366	NCP	%	74		30-130	Pass	
2.4.6-Trichlorophenol	M22-Ma55366	NCP	%	53		30-130	Pass	
2.6-Dichlorophenol	M22-Ma55366	NCP	%	97		30-130	Pass	
4-Chloro-3-methylphenol	M22-Ma55366	NCP	%	85		30-130	Pass	
Pentachlorophenol	M22-Ma55366	NCP	%	58		30-130	Pass	
Tetrachlorophenols - Total	M22-Ma55366	NCP	%	87		30-130	Pass	
Spike - % Recovery								
Phenols (non-Halogenated)				Result 1				
2-Cyclohexyl-4.6-dinitrophenol	M22-Ma55366	NCP	%	54		30-130	Pass	
2-Methyl-4.6-dinitrophenol	M22-Ma55366	NCP	%	57		30-130	Pass	
2-Nitrophenol	M22-Ma55366	NCP	%	93		30-130	Pass	
2.4-Dimethylphenol	M22-Ma55366	NCP	%	88		30-130	Pass	
2.4-Dinitrophenol	M22-Ma55366	NCP	%	51		30-130	Pass	
2-Methylphenol (o-Cresol)	M22-Ma55366	NCP	%	68		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M22-Ma55366	NCP	%	78		30-130	Pass	
4-Nitrophenol	M22-Ma55366	NCP	%	66		30-130	Pass	
Dinoseb	M22-Ma55366	NCP	%	75		30-130	Pass	
Phenol	M22-Ma55366	NCP	%	55		30-130	Pass	
Spike - % Recovery								
				Result 1				
Chromium (hexavalent)	M22-Ma57514	NCP	%	73		70-130	Pass	
Cyanide (total)	M22-Ma53713	NCP	%	120		70-130	Pass	
Fluoride (Total)	M22-Ma57542	NCP	%	87		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	M22-Ma55702	NCP	%	110		75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Cadmium	M22-Ma55702	NCP	%	104		75-125	Pass	
Chromium	M22-Ma55702	NCP	%	104		75-125	Pass	
Copper	M22-Ma55702	NCP	%	114		75-125	Pass	
Lead	M22-Ma60390	NCP	%	101		75-125	Pass	
Mercury	M22-Ma55702	NCP	%	124		75-125	Pass	
Molybdenum	M22-Ma55702	NCP	%	109		75-125	Pass	
Nickel	M22-Ma55702	NCP	%	104		75-125	Pass	
Selenium	M22-Ma55702	NCP	%	107		75-125	Pass	
Silver	M22-Ma55702	NCP	%	110		75-125	Pass	
Tin	M22-Ma55702	NCP	%	99		75-125	Pass	
Zinc	M22-Ma55702	NCP	%	93		75-125	Pass	
Spike - % Recovery								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1				
Perfluorobutanoic acid (PFBA)	M22-Ma55406	NCP	%	54		50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M22-Ma55406	NCP	%	85		50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M22-Ma55406	NCP	%	84		50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M22-Ma55406	NCP	%	74		50-150	Pass	
Perfluorooctanoic acid (PFOA)	M22-Ma55406	NCP	%	105		50-150	Pass	
Perfluorononanoic acid (PFNA)	M22-Ma55406	NCP	%	84		50-150	Pass	
Perfluorodecanoic acid (PFDA)	M22-Ma55406	NCP	%	85		50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M22-Ma55406	NCP	%	85		50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M22-Ma55406	NCP	%	76		50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M22-Ma55406	NCP	%	73		50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma55406	NCP	%	80		50-150	Pass	
Spike - % Recovery								
Perfluoroalkyl sulfonamido substances				Result 1				
Perfluorooctane sulfonamide (FOSA)	M22-Ma55406	NCP	%	76		50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma55406	NCP	%	85		50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma55406	NCP	%	74		50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma55406	NCP	%	93		50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma55406	NCP	%	84		50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma55406	NCP	%	65		50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma55406	NCP	%	73		50-150	Pass	
Spike - % Recovery								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1				
Perfluorobutanesulfonic acid (PFBS)	M22-Ma55406	NCP	%	70		50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M22-Ma55406	NCP	%	105		50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma55406	NCP	%	64		50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma55406	NCP	%	79		50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma55406	NCP	%	73		50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma55406	NCP	%	89		50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorooctanesulfonic acid (PFOS)	M22-Ma55406	NCP	%	71			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M22-Ma55406	NCP	%	117			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-Ma55406	NCP	%	88			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma55406	NCP	%	91			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma55406	NCP	%	95			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma55406	NCP	%	77			50-150	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-Ma52652	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M22-Ma56096	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M22-Ma56096	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M22-Ma56096	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Naphthalene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M22-Ma52652	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M22-Ma56096	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M22-Ma56096	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M22-Ma56096	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Hexachlorobutadiene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Benzene	M22-Ma52652	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Bromobenzene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	M22-Ma52652	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Iodomethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
m&p-Xylenes	M22-Ma52652	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methylene Chloride	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
o-Xylene	M22-Ma52652	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Styrene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	M22-Ma52652	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
trans-1.2-Dichloroethene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.3-Dichloropropene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M22-Ma52652	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes - Total*	M22-Ma52652	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M22-Ma55365	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4.4'-DDD	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4.4'-DDE	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4.4'-DDT	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M22-Ma55365	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M22-Ma55365	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M22-Ma55365	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M22-Ma55365	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M22-Ma55365	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M22-Ma55365	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M22-Ma55365	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M22-Ma55365	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M22-Ma55365	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4-Dichlorophenol	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4.5-Trichlorophenol	M22-Ma55365	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2.4.6-Trichlorophenol	M22-Ma55365	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2.6-Dichlorophenol	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M22-Ma55365	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M22-Ma55365	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M22-Ma55365	NCP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4.6-dinitrophenol	M22-Ma55365	NCP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4.6-dinitrophenol	M22-Ma55365	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M22-Ma55365	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2.4-Dimethylphenol	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4-Dinitrophenol	M22-Ma55365	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M22-Ma55365	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M22-Ma55365	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M22-Ma55365	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M22-Ma55365	NCP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M22-Ma55365	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate				Result 1	Result 2	RPD		
Cyanide (total)	M22-Ma53712	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Fluoride (Total)	M22-Ma56138	NCP	mg/kg	< 100	< 100	<1	30%	Pass
pH (1:5 Aqueous extract at 25°C as rec.)	M22-Ma53007	NCP	pH Units	7.1	7.3	pass	30%	Pass
% Moisture	M22-Ma55390	NCP	%	15	15	<1	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M22-Ma56072	NCP	mg/kg	2.0	2.3	14	30%	Pass
Cadmium	M22-Ma56072	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M22-Ma56072	NCP	mg/kg	7.9	8.2	4.0	30%	Pass
Copper	M22-Ma56072	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Lead	M22-Ma56072	NCP	mg/kg	19	19	<1	30%	Pass
Mercury	M22-Ma56072	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M22-Ma56072	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M22-Ma56072	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Selenium	M22-Ma56072	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M22-Ma56072	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M22-Ma56072	NCP	mg/kg	< 10	< 10	<1	30%	Pass
Zinc	M22-Ma56072	NCP	mg/kg	30	32	5.0	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M22-Ma55082	NCP	ug/kg	1000	840	17	30%	Pass
Perfluorodecanoic acid (PFDA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotridecanoic acid (PFTTrDA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate				Result 1	Result 2	RPD		
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M22-Ma55405	NCP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M22-Ma55405	NCP	ug/kg	< 10	< 10	<1	30%	Pass

Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M22-Ma55405	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-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M22-Ma55405	NCP	ug/kg	< 10	< 10	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M22-Ma55405	NCP	ug/kg	< 5	< 5	<1	30%	Pass

Comments
Sample Integrity

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

Qualifier Codes/Comments

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

Authorised by:

Michael Cassidy	Analytical Services Manager
Joseph Edouard	Senior Analyst (VIC)
Linda Chouman	Senior Analyst (NSW)
Scott Beddoes	Senior Analyst (NSW)
Mary Makarios	Senior Analyst (NSW)
Caitlin Breeze	Senior Analyst (VIC)
Vivian Wang	Senior Analyst (VIC)



Glenn Jackson
General Manager


Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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

CHAIN OF CUSTODY DOCUMENTATION		 Australian Laboratory Services Pty Ltd
CLIENT: Agon Environmental	SAMPLER: Luke D • EP Risk & Tina B Agan	
ADDRESS / OFFICE: Melbourne	MOBILE 1: +61 400 826 907 /Craig Trimbur	
PROJECT MANAGER (PM): Craig Trirtur	MOBILE 2: +61 490 411 004 (David Lawson)	
PROJECT ID: JC0927	EMAIL REPORT TO: Labrenorts.TST(F)anonenenviro.com.au anonenvironmentaliffesdat.com.au	
SITE: 20220325043559-ALS-13	P.O. NO.:	mrotherhublabresults1@wgtQ.com.au Amrft.Kaur@aaile-analvtics.com.au
RESULTS REQUIRED (Date): 5 days	QUOTE NO: ME-150-19 WGTP	EMAIL INVOICE TO: (If different to report) Labregort.s.TST@agonenviro.com.au agonenvironmental@esdat.com.au

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

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:	Notes:

SAMPLE INFORMATION /note: S ::: Soil W=Waten					CONTAINER INFORMATION															
ALSID	SAMPLE ID	MATRIX	OATE	Time	Type/Code	Total bottles														
1	SX_OB_20220324_08_07_SS_Primary_ALS	S	24.03.2022	08:07	Bucket	1	X	X	X	X	X									
2	SX_OB_20220324_08_11_8S_Duplicate_ALS	S	24.03.2022	08:11	Bucket	1	X	X	X	X	X									
3	SX_OB_20220324_08_36_SB_Blank_ALS	W	24.03.2022	08:36	Bottle	1				X										
4	sx_ob_20220324_08_33_SR_Rinsete_ALS	W	24.03.2022	08:33	Bottle	1				X										
	sx_OB_20220324_12_1s_ss_Primary_ALS	S	24.03.2022	12:18	Bucket	1	X	X	X	X	X									
	sx_oe-20220324_16_35_ss_Primary_ALS	S	24.03.2022	16:35	Bucket	1	X	X	X	X	X									
	sx_oe_20220324_16_27_ss_Triplicate_ALS	S	24.03.2022	16:27	Bucket	1		X	X	X	X									
	sx_OB_20220324_20_13_ss_Primary_ALS	S	24.03.2022	20:13	Bucket	1	X	X	X	X	X									
	sx_o8_20220325_00_08_SS_Primary_ALS	S	25.03.2022	00:08	Bucket	1	X	X	X	X	X									
	SX_08_20220325_04_18_SS_Primary_ALS	S	25.03.2022	04:18	Bucket	1	X	X	X	X	X									

Environmental Division
 Melbourne
 Work Order Reference
EM; 05361



Telephone: -61- 9 9600

RELINQUISHED BY:		RECEIVED BY:		METHOD OF SHIPMENT	
Name: EMW(I. O...-...)	Date: 10/03/2022	Name: U-I.	Date: 10/03/2022	Con' Note No:	
Of: V IIS/II.	Time: 10:00 AM	Of:	Time: 10:00 AM	Transoort 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/Cd Preserved; s = Sodium Hydroxide Preaerveed 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 Bad for Acid Sulphate Soils; B = Unpreserved Bag.



CERTIFICATE OF ANALYSIS

Work Order : EM2205361
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 : 20220325043559-ALS-13
Sampler : Luke D - EP Risk & Tina B Agon
Site : 20220325043559-ALS-13
Quote number : EN/150/19 -WGTP -Bulk Sample Quote
No. of samples received : 18
No. of samples analysed : 18

Page : 1 of 29
Laboratory : Environmental Division Melbourne
Contact : Bronwyn Sheen
Address : 4 Westall Rd Springvale VIC Australia 3171
Telephone : +6138549 9600
Date Samples Received : 25-Mar-2022 15:40
Date Analysis Commenced : 28-Mar-2022
Issue Date : 01-Apr-2022 17:57



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.

Table with 3 columns: Signatories, Position, Accreditation Category. Rows include Dilani Fernando (Laboratory Coordinator), Eric Chau (Metals Team Leader), Jarwis Nheu (Senior Inorganic Chemist), Nancy Wang (2IC Organic Chemist), Nancy Wang (2IC Organic Chemist), Nikki Stepniewski (Senior Inorganic Instrument Chemist), and Xing Lin (Senior Organic Chemist).



General Comments

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

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

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

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

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

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

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

- EP231X: Poor matrix spike recovery for sample EM2205510-002 due to sample matrix interference.
- EG048G: EM2205647 #10 poor matrix spike recovery for hexavalent chromium due to matrix effects. Confirmed by re-analysis.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP074-UT: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074-WF: Where reported, Sum of trichlorobenzenes is the sum of the reported concentrations of 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene, and 1,3,5-Trichlorobenzene at or above the LOR.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.
- EN60: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.
- EN60-DI: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.
- EP231X-INJ: The direct injection LCMSMS method may be used where the sample matrix is not suitable for Solid Phase Extraction (e.g. significant particulate load) or where only a single sample container is received.



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

		Sampling date / time		SX_OB_20220324_08_07_SS_Primary_ALS	SX_OB_20220324_08_11_SS_Duplicate_ALS	SX_OB_20220324_12_18_SS_Primary_ALS	SX_OB_20220324_16_35_SS_Primary_ALS	SX_OB_20220324_16_27_SS_Triplicate_ALS
Compound	CAS Number	LOR	Unit	EM2205361-001	EM2205361-002	EM2205361-005	EM2205361-006	EM2205361-007
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220324_08_07_SS_Primary_ALS	SX_OB_20220324_08_11_SS_Duplicate_ALS	SX_OB_20220324_12_18_SS_Primary_ALS	SX_OB_20220324_16_35_SS_Primary_ALS	SX_OB_20220324_16_27_SS_Triplicate_ALS
Sampling date / time				24-Mar-2022 08:07	24-Mar-2022 08:11	24-Mar-2022 12:18	24-Mar-2022 16:35	24-Mar-2022 16:27
Compound	CAS Number	LOR	Unit	EM2205361-001	EM2205361-002	EM2205361-005	EM2205361-006	EM2205361-007
				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	%	94.8	93.2	90.5	100	85.6
13C8-PFOA	----	0.02	%	101	102	106	104	103



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

		Sample ID		SX_OB_20220324_20 _13_SS_Primary_ALS	SX_OB_20220325_00 _08_SS_Primary_ALS	SX_OB_20220325_04 _18_SS_Primary_ALS	----	----
		Sampling date / time		24-Mar-2022 20:13	25-Mar-2022 00:08	25-Mar-2022 04:18	----	----
Compound	CAS Number	LOR	Unit	EM2205361-008	EM2205361-009	EM2205361-010	-----	-----
				Result	Result	Result	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220324_20 _13_SS_Primary_ALS	SX_OB_20220325_00 _08_SS_Primary_ALS	SX_OB_20220325_04 _18_SS_Primary_ALS	----	----
Sampling date / time				24-Mar-2022 20:13	25-Mar-2022 00:08	25-Mar-2022 04:18	----	----
Compound	CAS Number	LOR	Unit	EM2205361-008	EM2205361-009	EM2205361-010	-----	-----
				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	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	----	----
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	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	93.8	95.1	93.3	----	----
13C8-PFOA	----	0.02	%	104	109	102	----	----



Analytical Results

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

Sample ID

		Sampling date / time		SX_OB_20220324_08_07_SS_Primary_ALS	SX_OB_20220324_08_11_SS_Duplicate_ALS	SX_OB_20220324_12_18_SS_Primary_ALS	SX_OB_20220324_16_35_SS_Primary_ALS	SX_OB_20220324_16_27_SS_Triplicate_ALS
Compound	CAS Number	LOR	Unit	EM2205361-011	EM2205361-012	EM2205361-013	EM2205361-014	EM2205361-015
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

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

Sample ID

				SX_OB_20220324_08_07_SS_Primary_ALS	SX_OB_20220324_08_11_SS_Duplicate_ALS	SX_OB_20220324_12_18_SS_Primary_ALS	SX_OB_20220324_16_35_SS_Primary_ALS	SX_OB_20220324_16_27_SS_Triplicate_ALS
Sampling date / time				24-Mar-2022 08:07	24-Mar-2022 08:11	24-Mar-2022 12:18	24-Mar-2022 16:35	24-Mar-2022 16:27
Compound	CAS Number	LOR	Unit	EM2205361-011	EM2205361-012	EM2205361-013	EM2205361-014	EM2205361-015
				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	%	97.4	90.8	90.4	94.9	94.9
13C8-PFOA	----	0.02	%	98.9	100	104	101	102



Analytical Results

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

Sample ID

				SX_OB_20220324_20 _13_SS_Primary_ALS	SX_OB_20220325_00 _08_SS_Primary_ALS	SX_OB_20220325_04 _18_SS_Primary_ALS	----	----
Sampling date / time				24-Mar-2022 20:13	25-Mar-2022 00:08	25-Mar-2022 04:18	----	----
Compound	CAS Number	LOR	Unit	EM2205361-016	EM2205361-017	EM2205361-018	-----	-----
				Result	Result	Result	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----



Analytical Results

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

Sample ID

				SX_OB_20220324_20 _13_SS_Primary_ALS	SX_OB_20220325_00 _08_SS_Primary_ALS	SX_OB_20220325_04 _18_SS_Primary_ALS	----	----
Sampling date / time				24-Mar-2022 20:13	25-Mar-2022 00:08	25-Mar-2022 04:18	----	----
Compound	CAS Number	LOR	Unit	EM2205361-016	EM2205361-017	EM2205361-018	-----	-----
				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	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.05	µg/L	<0.05	<0.05	<0.05	----	----
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	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Sum of PFAS (WA DER List)	----	0.05	µg/L	<0.05	<0.05	<0.05	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	88.5	92.1	93.0	----	----
13C8-PFOA	----	0.02	%	100	100	101	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220324_08_07_SS_Primary_ALS	SX_OB_20220324_08_11_SS_Duplicate_ALS	SX_OB_20220324_12_18_SS_Primary_ALS	SX_OB_20220324_16_35_SS_Primary_ALS	SX_OB_20220324_16_27_SS_Triplicate_ALS
Sampling date / time				24-Mar-2022 08:07	24-Mar-2022 08:11	24-Mar-2022 12:18	24-Mar-2022 16:35	24-Mar-2022 16:27
Compound	CAS Number	LOR	Unit	EM2205361-001	EM2205361-002	EM2205361-005	EM2205361-006	EM2205361-007
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	8.0	8.2	7.7	7.7	7.8
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	25.8	28.0	28.1	28.8	25.3
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	24	27	34	32	19
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	5	mg/kg	96	102	102	104	102
Copper	7440-50-8	5	mg/kg	54	57	56	59	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	163	169	151	180	164
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Silver	7440-22-4	2	mg/kg	<2	<2	<2	<2	<2
Tin	7440-31-5	10	mg/kg	<10	<10	<10	<10	<10
Zinc	7440-66-6	5	mg/kg	86	90	110	96	78
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	1.4	<1.0	1.2	1.2	1.6
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	880	550	420	420	540
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Initial pH	----	0.1	pH Unit	9.2	9.3	9.0	9.5	9.5
After HCl pH	----	0.1	pH Unit	1.4	1.4	1.3	1.4	1.4
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	5.0	5.0
Final pH	----	0.1	pH Unit	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_OB_20220324_08_07_SS_Primary_ALS	SX_OB_20220324_08_11_SS_Duplicate_ALS	SX_OB_20220324_12_18_SS_Primary_ALS	SX_OB_20220324_16_35_SS_Primary_ALS	SX_OB_20220324_16_27_SS_Triplicate_ALS
Sampling date / time				24-Mar-2022 08:07	24-Mar-2022 08:11	24-Mar-2022 12:18	24-Mar-2022 16:35	24-Mar-2022 16:27
Compound	CAS Number	LOR	Unit	EM2205361-001	EM2205361-002	EM2205361-005	EM2205361-006	EM2205361-007
				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_OB_20220324_08_07_SS_Primary_ALS	SX_OB_20220324_08_11_SS_Duplicate_ALS	SX_OB_20220324_12_18_SS_Primary_ALS	SX_OB_20220324_16_35_SS_Primary_ALS	SX_OB_20220324_16_27_SS_Triplicate_ALS
Sampling date / time				24-Mar-2022 08:07	24-Mar-2022 08:11	24-Mar-2022 12:18	24-Mar-2022 16:35	24-Mar-2022 16:27
Compound	CAS Number	LOR	Unit	EM2205361-001	EM2205361-002	EM2205361-005	EM2205361-006	EM2205361-007
				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_OB_20220324_08 _07_SS_Primary_ALS	SX_OB_20220324_08 _11_SS_Duplicate_ALS	SX_OB_20220324_12 _18_SS_Primary_ALS	SX_OB_20220324_16 _35_SS_Primary_ALS	SX_OB_20220324_16 _27_SS_Triplicate_ALS
Sampling date / time				24-Mar-2022 08:07	24-Mar-2022 08:11	24-Mar-2022 12:18	24-Mar-2022 16:35	24-Mar-2022 16:27
Compound	CAS Number	LOR	Unit	EM2205361-001	EM2205361-002	EM2205361-005	EM2205361-006	EM2205361-007
				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_OB_20220324_08_07_SS_Primary_ALS	SX_OB_20220324_08_11_SS_Duplicate_ALS	SX_OB_20220324_12_18_SS_Primary_ALS	SX_OB_20220324_16_35_SS_Primary_ALS	SX_OB_20220324_16_27_SS_Triplicate_ALS
Sampling date / time				24-Mar-2022 08:07	24-Mar-2022 08:11	24-Mar-2022 12:18	24-Mar-2022 16:35	24-Mar-2022 16:27
Compound	CAS Number	LOR	Unit	EM2205361-001	EM2205361-002	EM2205361-005	EM2205361-006	EM2205361-007
				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	72-54-8/72-55-9/50-2	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 201								
>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_OB_20220324_08_07_SS_Primary_ALS	SX_OB_20220324_08_11_SS_Duplicate_ALS	SX_OB_20220324_12_18_SS_Primary_ALS	SX_OB_20220324_16_35_SS_Primary_ALS	SX_OB_20220324_16_27_SS_Triplicate_ALS
Sampling date / time				24-Mar-2022 08:07	24-Mar-2022 08:11	24-Mar-2022 12:18	24-Mar-2022 16:35	24-Mar-2022 16:27
Compound	CAS Number	LOR	Unit	EM2205361-001	EM2205361-002	EM2205361-005	EM2205361-006	EM2205361-007
				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_OB_20220324_08_07_SS_Primary_ALS	SX_OB_20220324_08_11_SS_Duplicate_ALS	SX_OB_20220324_12_18_SS_Primary_ALS	SX_OB_20220324_16_35_SS_Primary_ALS	SX_OB_20220324_16_27_SS_Triplicate_ALS
Sampling date / time				24-Mar-2022 08:07	24-Mar-2022 08:11	24-Mar-2022 12:18	24-Mar-2022 16:35	24-Mar-2022 16:27
Compound	CAS Number	LOR	Unit	EM2205361-001	EM2205361-002	EM2205361-005	EM2205361-006	EM2205361-007
				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	%	120	120	120	118	120
EP074S: VOC Surrogates (Ultra-Trace)								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	80.9	97.4	83.1	71.0	92.1
Toluene-D8	2037-26-5	0.1	%	88.6	108	95.6	77.1	103
4-Bromofluorobenzene	460-00-4	0.1	%	95.8	107	97.1	84.5	103
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	103	113	103	100.0	96.3
2-Chlorophenol-D4	93951-73-6	0.025	%	103	113	97.1	99.6	96.8
2,4,6-Tribromophenol	118-79-6	0.025	%	87.4	90.0	94.4	86.2	87.9
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								
Nitrobenzene-D5	4165-60-0	0.025	%	93.8	86.6	87.9	91.3	91.7
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	80.8	81.4	80.4	81.9	82.8
2-Fluorobiphenyl	321-60-8	0.025	%	90.7	94.9	94.2	91.7	95.2
Anthracene-d10	1719-06-8	0.025	%	93.4	93.3	96.4	89.9	92.5
4-Terphenyl-d14	1718-51-0	0.025	%	94.2	90.9	94.3	85.2	88.7
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	94.8	92.8	96.3	91.4	99.0
13C8-PFOA	----	0.0002	%	102	103	104	104	104



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220324_20 _13_SS_Primary_ALS	SX_OB_20220325_00 _08_SS_Primary_ALS	SX_OB_20220325_04 _18_SS_Primary_ALS	SX_OB_20220324_08 _07_SS_Primary_ALS	SX_OB_20220324_08 _11_SS_Duplicate_ALS
Sampling date / time				24-Mar-2022 20:13	25-Mar-2022 00:08	25-Mar-2022 04:18	24-Mar-2022 08:07	24-Mar-2022 08:11
Compound	CAS Number	LOR	Unit	EM2205361-008	EM2205361-009	EM2205361-010	EM2205361-011	EM2205361-012
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl ₂)	----	0.1	pH Unit	7.7	7.8	7.7	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	31.2	30.0	29.1	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	36	38	28	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	----
Chromium	7440-47-3	5	mg/kg	101	103	107	----	----
Copper	7440-50-8	5	mg/kg	61	66	56	----	----
Lead	7439-92-1	5	mg/kg	<5	<5	<5	----	----
Molybdenum	7439-98-7	5	mg/kg	<5	<5	<5	----	----
Nickel	7440-02-0	5	mg/kg	190	189	170	----	----
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	----	----
Silver	7440-22-4	2	mg/kg	<2	<2	<2	----	----
Tin	7440-31-5	10	mg/kg	<10	<10	<10	----	----
Zinc	7440-66-6	5	mg/kg	102	91	86	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	----	----
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	1.0	mg/kg	1.5	<1.0	<1.0	----	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	5	mg/kg	<5	<5	<5	----	----
EK040T: Fluoride Total								
Fluoride	16984-48-8	100	mg/kg	350	340	480	----	----
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Initial pH	----	0.1	pH Unit	9.4	9.6	9.4	----	----
After HCl pH	----	0.1	pH Unit	1.4	1.5	1.4	----	----
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	5.0	----	----
Final pH	----	0.1	pH Unit	5.1	5.1	5.0	----	----
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Final pH	----	0.1	pH Unit	----	----	----	9.7	10.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220324_20_13_SS_Primary_ALS	SX_OB_20220325_00_08_SS_Primary_ALS	SX_OB_20220325_04_18_SS_Primary_ALS	SX_OB_20220324_08_07_SS_Primary_ALS	SX_OB_20220324_08_11_SS_Duplicate_ALS
Sampling date / time				24-Mar-2022 20:13	25-Mar-2022 00:08	25-Mar-2022 04:18	24-Mar-2022 08:07	24-Mar-2022 08:11
Compound	CAS Number	LOR	Unit	EM2205361-008	EM2205361-009	EM2205361-010	EM2205361-011	EM2205361-012
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	----	----
EP074I: Volatile Halogenated Compounds								
Vinyl chloride	75-01-4	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1-Dichloroethene	75-35-4	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
trans-1,2-Dichloroethene	156-60-5	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
cis-1,2-Dichloroethene	156-59-2	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Chloroform	67-66-3	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1,1-Trichloroethane	71-55-6	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Carbon Tetrachloride	56-23-5	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,2-Dichloroethane	107-06-2	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Trichloroethene	79-01-6	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1,2-Trichloroethane	79-00-5	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Tetrachloroethene	127-18-4	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1,1,2-Tetrachloroethane	630-20-6	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,1,2,2-Tetrachloroethane	79-34-5	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Hexachlorobutadiene	87-68-3	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
Chlorobenzene	108-90-7	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,4-Dichlorobenzene	106-46-7	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,2-Dichlorobenzene	95-50-1	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
1,2,4-Trichlorobenzene	120-82-1	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
^ Sum of volatile chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
^ Sum of other chlorinated hydrocarbons	----	0.50	mg/kg	<0.50	<0.50	<0.50	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220324_20 _13_SS_Primary_ALS	SX_OB_20220325_00 _08_SS_Primary_ALS	SX_OB_20220325_04 _18_SS_Primary_ALS	SX_OB_20220324_08 _07_SS_Primary_ALS	SX_OB_20220324_08 _11_SS_Duplicate_AL S
Sampling date / time				24-Mar-2022 20:13	25-Mar-2022 00:08	25-Mar-2022 04:18	24-Mar-2022 08:07	24-Mar-2022 08:11
Compound	CAS Number	LOR	Unit	EM2205361-008	EM2205361-009	EM2205361-010	EM2205361-011	EM2205361-012
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Halogenated)								
2-Chlorophenol	95-57-8	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
2,4-Dichlorophenol	120-83-2	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
2,6-Dichlorophenol	87-65-0	0.50	mg/kg	<0.50	<0.50	<0.50	----	----
4-Chloro-3-methylphenol	59-50-7	1.00	mg/kg	<1.00	<1.00	<1.00	----	----
2,4,5-Trichlorophenol	95-95-4	1.00	mg/kg	<1.00	<1.00	<1.00	----	----
2,4,6-Trichlorophenol	88-06-2	1.00	mg/kg	<1.00	<1.00	<1.00	----	----
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	<0.03	----	----
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	<1.0	<1.0	----	----
^ Sum of Phenols (halogenated)	----	1.00	mg/kg	<1.00	<1.00	<1.00	----	----
EP075A: Phenolic Compounds (Non-halogenated)								
Phenol	108-95-2	1	mg/kg	<1	<1	<1	----	----
2-Methylphenol	95-48-7	1	mg/kg	<1	<1	<1	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	----	----
2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	<1	----	----
2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	<1	----	----
2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	<5	----	----
4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	<5	----	----
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	<5	----	----
Dinoseb	88-85-7	20	mg/kg	<20	<20	<20	----	----
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	20	mg/kg	<20	<20	<20	----	----
^ Sum of Phenols (non-halogenated)	----	20	mg/kg	<20	<20	<20	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220324_20 _13_SS_Primary_ALS	SX_OB_20220325_00 _08_SS_Primary_ALS	SX_OB_20220325_04 _18_SS_Primary_ALS	SX_OB_20220324_08 _07_SS_Primary_ALS	SX_OB_20220324_08 _11_SS_Duplicate_AL S
Sampling date / time				24-Mar-2022 20:13	25-Mar-2022 00:08	25-Mar-2022 04:18	24-Mar-2022 08:07	24-Mar-2022 08:11
Compound	CAS Number	LOR	Unit	EM2205361-008	EM2205361-009	EM2205361-010	EM2205361-011	EM2205361-012
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	<1.0	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	<0.03	----	----
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	<0.03	----	----
Endosulfan 1	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endosulfan 2	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Sum of organochlorine pesticides	----	0.10	mg/kg	<0.10	<0.10	<0.10	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220324_20_13_SS_Primary_ALS	SX_OB_20220325_00_08_SS_Primary_ALS	SX_OB_20220325_04_18_SS_Primary_ALS	SX_OB_20220324_08_07_SS_Primary_ALS	SX_OB_20220324_08_11_SS_Duplicate_ALS
Sampling date / time				24-Mar-2022 20:13	25-Mar-2022 00:08	25-Mar-2022 04:18	24-Mar-2022 08:07	24-Mar-2022 08:11
Compound	CAS Number	LOR	Unit	EM2205361-008	EM2205361-009	EM2205361-010	EM2205361-011	EM2205361-012
				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	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Chlordane	57-74-9	0.10	mg/kg	<0.10	<0.10	<0.10	----	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	<0.03	----	----
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 201								
>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	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220324_20_13_SS_Primary_ALS	SX_OB_20220325_00_08_SS_Primary_ALS	SX_OB_20220325_04_18_SS_Primary_ALS	SX_OB_20220324_08_07_SS_Primary_ALS	SX_OB_20220324_08_11_SS_Duplicate_ALS
Sampling date / time				24-Mar-2022 20:13	25-Mar-2022 00:08	25-Mar-2022 04:18	24-Mar-2022 08:07	24-Mar-2022 08:11
Compound	CAS Number	LOR	Unit	EM2205361-008	EM2205361-009	EM2205361-010	EM2205361-011	EM2205361-012
				Result	Result	Result	Result	Result
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	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorononanoic acid (PFNA)	375-95-1	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	10.0	µg/kg	<10.0	<10.0	<10.0	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	10.0	µg/kg	<10.0	<10.0	<10.0	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220324_20_13_SS_Primary_ALS	SX_OB_20220325_00_08_SS_Primary_ALS	SX_OB_20220325_04_18_SS_Primary_ALS	SX_OB_20220324_08_07_SS_Primary_ALS	SX_OB_20220324_08_11_SS_Duplicate_ALS
Sampling date / time				24-Mar-2022 20:13	25-Mar-2022 00:08	25-Mar-2022 04:18	24-Mar-2022 08:07	24-Mar-2022 08:11
Compound	CAS Number	LOR	Unit	EM2205361-008	EM2205361-009	EM2205361-010	EM2205361-011	EM2205361-012
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	10.0	µg/kg	<10.0	<10.0	<10.0	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	50.0	µg/kg	<50.0	<50.0	<50.0	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	5.0	µg/kg	<5.0	<5.0	<5.0	----	----
Sum of PFAS (WA DER List)	----	10.0	µg/kg	<10.0	<10.0	<10.0	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	118	119	106	----	----
EP074S: VOC Surrogates (Ultra-Trace)								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	86.4	84.9	59.0	----	----
Toluene-D8	2037-26-5	0.1	%	97.3	101	64.2	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	99.9	99.1	77.4	----	----
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	94.4	103	90.8	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%	96.2	105	85.6	----	----
2,4,6-Tribromophenol	118-79-6	0.025	%	85.2	96.5	80.3	----	----
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								
Nitrobenzene-D5	4165-60-0	0.025	%	91.8	101	79.7	----	----
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	83.3	88.8	63.9	----	----
2-Fluorobiphenyl	321-60-8	0.025	%	89.2	100	82.5	----	----
Anthracene-d10	1719-06-8	0.025	%	89.4	98.8	82.7	----	----
4-Terphenyl-d14	1718-51-0	0.025	%	85.6	97.6	80.7	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	106	92.0	92.8	----	----
13C8-PFOA	----	0.0002	%	102	99.7	97.4	----	----



Analytical Results

Sub-Matrix: **SOIL**
 (Matrix: **SOIL**)

Sample ID

				SX_OB_20220324_12 _18_SS_Primary_ALS	SX_OB_20220324_16 _35_SS_Primary_ALS	SX_OB_20220324_16 _27_SS_Triplicate_AL S	SX_OB_20220324_20 _13_SS_Primary_ALS	SX_OB_20220325_00 _08_SS_Primary_ALS
Sampling date / time				24-Mar-2022 12:18	24-Mar-2022 16:35	24-Mar-2022 16:27	24-Mar-2022 20:13	25-Mar-2022 00:08
Compound	CAS Number	LOR	Unit	EM2205361-013	EM2205361-014	EM2205361-015	EM2205361-016	EM2205361-017
				Result	Result	Result	Result	Result
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (lastic Ve sel)								
Final pH	----	0.1	pH Unit	9.7	9.6	9.7	9.5	9.5



Analytical Results

Sub-Matrix: **SOIL**
 (Matrix: **SOIL**)

Sample ID

**SX_OB_20220325_04
 _18_SS_Primary_ALS**

Sampling date / time

25-Mar-2022 04:18

Compound

CAS Number

LOR

Unit

EM2205361-018

Result

EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (lastic Vessel)

Final pH

0.1

pH Unit

9.5



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				SX_OB_20220324_08 _36_SB_Blank_ALS	SX_OB_20220324_08 _33_SR_Rinsate_ALS	----	----	----
				24-Mar-2022 08:36	24-Mar-2022 08:33	----	----	----
Compound	CAS Number	LOR	Unit	EM2205361-003	EM2205361-004	-----	-----	-----
Sampling date / time				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_20220324_08 _36_SB_Blank_ALS	SX_OB_20220324_08 _33_SR_Rinsate_ALS	----	----	----
Sampling date / time				24-Mar-2022 08:36	24-Mar-2022 08:33	----	----	----	
Compound	CAS Number	LOR	Unit	EM2205361-003	EM2205361-004	-----	-----	-----	
				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	%	103	102	----	----	----	
13C8-PFOA	----	0.02	%	102	103	----	----	----	



Surrogate Control Limits

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

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

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

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



QUALITY CONTROL REPORT

Work Order	: EM2205361	Page	: 1 of 31
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: DAVID LAWSON	Contact	: Bronwyn Sheen
Address	: D1.1 63-85 TURNER STREET PORT MELBOURNE 3207	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9600
Project	: JC0927	Date Samples Received	: 25-Mar-2022
Order number	: ----	Date Analysis Commenced	: 28-Mar-2022
C-O-C number	: 20220325043559-ALS-13	Issue Date	: 01-Apr-2022
Sampler	: Luke D - EP Risk & Tina B Agon		
Site	: 20220325043559-ALS-13		
Quote number	: EN/150/19 -WGTP -Bulk Sample Quote		
No. of samples received	: 18		
No. of samples analysed	: 18		



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 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
Eric Chau	Metals Team Leader	Melbourne Inorganics, Springvale, VIC
Jarwis Nheu	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC



General Comments

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

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4257736)									
EM2205308-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	7	7	0.0	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	10	8	32.0	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	11	9	18.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	17	12	37.9	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	33	28	17.8	No Limit
EM2205308-018	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	15	18	13.2	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	12	13	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	21	24	11.7	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	8	8	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	44	45	0.0	No Limit
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4257739)									



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: 4257739) - continued									
EM2205361-008	SX_OB_20220324_20_13_ SS_Primary_ALS	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	101	95	6.5	0% - 20%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	190	176	8.2	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	36	34	5.8	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	61	61	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	102	100	1.8	0% - 20%		
EM2205366-015	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	24	23	0.0	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	3	3	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	6	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		
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4259356)									
EM2205241-002	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.5	7.6	0.0	0% - 20%
EM2205361-005	SX_OB_20220324_12_18_ SS_Primary_ALS	EA001: pH (CaCl2)	----	0.1	pH Unit	7.7	7.7	0.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4258300)									
EM2205308-017	Anonymous	EA055: Moisture Content	----	0.1	%	15.5	16.0	2.6	0% - 20%
EM2205324-004	Anonymous	EA055: Moisture Content	----	0.1	%	15.1	15.2	0.9	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4257737)									
EM2205308-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2205308-018	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: 4257738)									
EM2205361-008	SX_OB_20220324_20_13_ SS_Primary_ALS	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2205366-015	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: 4256974)									
EM2205241-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	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 (%)
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 4256974) - continued									
EM2205324-004	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: 4258138)									
EM2205308-014	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EM2205242-016	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 4258140)									
EM2205361-008	SX_OB_20220324_20_13_ SS_Primary_ALS	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<5	<5	0.0	No Limit
EM2205385-004	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EK040T: Fluoride Total (QC Lot: 4256970)									
EM2205308-014	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	120	130	0.0	No Limit
EM2205361-007	SX_OB_20220324_16_27_ SS_Triplicate_ALS	EK040T: Fluoride	16984-48-8	40	mg/kg	540	480	10.7	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4256830)									
EM2205241-002	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2205361-009	SX_OB_20220325_00_08_ 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: 4252249)									
EM2205361-001	SX_OB_20220324_08_07_ SS_Primary_ALS	EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074-UT: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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: 4252249)									
EM2205361-001	SX_OB_20220324_08_07_ SS_Primary_ALS	EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP074I: Volatile Halogenated Compounds (QC Lot: 4252249)									
EM2205361-001	SX_OB_20220324_08_07_ 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



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: 4252249) - continued									
EM2205361-001	SX_OB_20220324_08_07_ SS_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: 4256828)									
EM2205241-002	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
EM2205361-009	SX_OB_20220325_00_08_ SS_Primary_ALS	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.50	<0.50	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<1.00	<1.00	0.0	No Limit
		EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-9 0-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit
EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 4256828)									
EM2205241-002	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: 4256828) - continued									
EM2205241-002	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
EM2205361-009	SX_OB_20220325_00_08_ 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: 4256828)									
EM2205241-002	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	1.7	1.2	35.6	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	0.6	0.5	23.9	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	7.1	4.5	45.3	0% - 50%
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	6.8	4.3	45.6	0% - 50%
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	3.8	2.4	45.1	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	2.9	1.8	43.3	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	3.3	2.1	44.7	No Limit
		EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	1.2	0.8	38.5	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	1.1	0.8	35.6	No Limit
		EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	5.5	3.5	45.3	No Limit
EM2205361-009	SX_OB_20220325_00_08_ 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		



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: 4256828) - continued									
EM2205361-009	SX_OB_20220325_00_08_ SS_Primary_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: 4256828)									
EM2205241-002	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		
EM2205361-009	SX_OB_20220325_00_08_ 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



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: 4256828) - continued									
EM2205361-009	SX_OB_20220325_00_08_ SS_Primary_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: 4252249)									
EM2205361-001	SX_OB_20220324_08_07_ SS_Primary_ALS	EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<20	<20	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4256829)									
EM2205241-002	Anonymous	EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	140	29.8	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	140	94.7	No Limit
EM2205361-009	SX_OB_20220325_00_08_ 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: 4252249)									
EM2205361-001	SX_OB_20220324_08_07_ 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: 4256829)									
EM2205241-002	Anonymous	EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	140	200	33.5	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	140	200	35.3	No Limit
EM2205361-009	SX_OB_20220325_00_08_ 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



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: 4259525)									
EM2205361-001	SX_OB_20220324_08_07_ SS_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EM2205361-010	SX_OB_20220325_04_18_ SS_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4259525)									
EM2205361-001	SX_OB_20220324_08_07_ SS_Primary_ALS	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EM2205361-010	SX_OB_20220325_04_18_ SS_Primary_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<5 µg/kg	<0.005	0.0	No Limit
		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		
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4259525)									



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: 4259525) - continued									
EM2205361-001	SX_OB_20220324_08_07_ SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EM2205361-010	SX_OB_20220325_04_18_ SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4259525)									
EM2205361-001	SX_OB_20220324_08_07_ SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EM2205361-010	SX_OB_20220325_04_18_ SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit



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: 4259525) - continued									
EM2205361-010	SX_OB_20220325_04_18_ SS_Primary_ALS	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: 4259525)									
EM2205361-001	SX_OB_20220324_08_07_ SS_Primary_ALS	EP231X: Sum of PFAS	----	0.0002	mg/kg	<50.0 µg/kg	<0.0500	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
EM2205361-010	SX_OB_20220325_04_18_ SS_Primary_ALS	EP231X: Sum of PFAS	----	0.0002	mg/kg	<50.0 µg/kg	<0.0500	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
Sub-Matrix: WATER									
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: 4258317)									
EM2205510-001	Anonymous	EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	1.82	1.96	7.5	0% - 20%
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	2.05	2.09	1.9	0% - 20%
		EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.31	0.34	8.5	0% - 50%
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.29	0.31	6.8	0% - 50%
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.16	0.09	53.3	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: 4260789)									
EM2205361-002	SX_OB_20220324_08_11_ SS_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
EM2205464-001	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



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: 4260789) - continued									
EM2205464-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4260790)									
EM2205361-012	SX_OB_20220324_08_11_ SS_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
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4258317)									
EM2205510-001	Anonymous	EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.46	0.47	2.9	0% - 20%
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.35	0.38	10.0	0% - 50%
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	1.16	1.06	9.0	0% - 20%
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.30	0.32	6.4	0% - 50%
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	0.03	0.03	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	0.17	<0.10	53.3	No Limit
		EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4260789)							
EM2205361-002	SX_OB_20220324_08_11_ SS_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
		EM2205464-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3			0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4260789) - continued									
EM2205464-001	Anonymous	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: 4260790)									
EM2205361-012	SX_OB_20220324_08_11_ SS_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		
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4258317)									
EM2205510-001	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: 4260789)									
EM2205361-002	SX_OB_20220324_08_11_ SS_Duplicate_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4260789) - continued									
EM2205361-002	SX_OB_20220324_08_11_ SS_Duplicate_ALS	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2205464-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4260790)									
EM2205361-012	SX_OB_20220324_08_11_ SS_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
		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: 4258317)									



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: 4258317) - continued									
EM2205510-001	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	0.71	0.74	3.2	0% - 50%
		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: 4260789)									
EM2205361-002	SX_OB_20220324_08_11_ SS_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
EM2205464-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4260790)									
EM2205361-012	SX_OB_20220324_08_11_ SS_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
EP231P: PFAS Sums (QC Lot: 4258317)									
EM2205510-001	Anonymous	EP231X-INJ: Sum of PFAS	----	0.01	µg/L	7.81	7.79	0.3	0% - 20%
		EP231X-INJ: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	3.87	4.05	4.5	0% - 20%
		EP231X-INJ: Sum of PFAS (WA DER List)	----	0.01	µg/L	7.33	7.36	0.4	0% - 20%
EP231P: PFAS Sums (QC Lot: 4260789)									

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 Work Order : EM2205361
 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: 4260789) - continued									
EM2205361-002	SX_OB_20220324_08_11_ SS_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
EM2205464-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763- 23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4260790)									
EM2205361-012	SX_OB_20220324_08_11_ SS_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



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	Spike Recovery (%)		Acceptable Limits (%)	
					Concentration	LCS	Low	High	
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4257736)									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	83.6	70.0	130	
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	53.2	50.0	130	
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	90.1	70.0	130	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	80.0	70.0	130	
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	78.6	70.0	130	
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	86.2	70.0	130	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	84.3	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	74.0	70.0	130	
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	90.9	70.0	130	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	72.9	70.0	130	
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4257739)									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	94.0	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	102	70.0	130	
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	91.9	70.0	130	
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	87.2	70.0	130	
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	87.4	70.0	130	
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	96.9	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	78.5	70.0	130	
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	99.5	70.0	130	
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	77.3	70.0	130	
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4258626)									
EN60-DIa-P: Final pH	----	0.1	pH Unit	6.7	----	----	----	----	
EA001: pH in soil using 0.01M CaCl extract (QCLot: 4259356)									
EA001: pH (CaCl2)	----	----	pH Unit	----	4 pH Unit	101	98.8	101	
				----	7 pH Unit	101	99.3	101	
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4257737)									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	93.8	70.0	130	
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4257738)									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	89.8	70.0	130	
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4256974)									
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	74.9	70.0	130	



Sub-Matrix: SOIL

Method: Compound				CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
							Result	Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4258138)											
EK026SF: Total Cyanide				57-12-5	1	mg/kg	<1	20 mg/kg	81.1	70.0	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4258140)											
EK026SF: Total Cyanide				57-12-5	1	mg/kg	<1	20 mg/kg	84.9	70.0	130
EK040T: Fluoride Total (QCLot: 4256970)											
EK040T: Fluoride				16984-48-8	40	mg/kg	<40	400 mg/kg	108	75.2	110
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4256830)											
EP066-EM: Total Polychlorinated biphenyls				----	0.1	mg/kg	<0.1	1 mg/kg	124	67.4	136
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4252249)											
EP074-UT: Benzene				71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	90.6	69.2	116
EP074-UT: Toluene				108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	88.8	67.7	116
EP074-UT: Ethylbenzene				100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	89.8	66.6	115
EP074-UT: meta- & para-Xylene				108-38-3 106-42-3	0.5	mg/kg	<0.5	4.2 mg/kg	88.0	65.2	112
EP074-UT: Styrene				100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	87.5	69.4	111
EP074-UT: ortho-Xylene				95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	87.6	68.4	110
EP074H: Naphthalene (QCLot: 4252249)											
EP074-UT: Naphthalene				91-20-3	1	mg/kg	<1	0.6 mg/kg	95.4	72.3	114
EP074I: Volatile Halogenated Compounds (QCLot: 4252249)											
EP074-UT: Vinyl chloride				75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	88.0	47.0	138
EP074-UT: 1,1-Dichloroethene				75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	93.0	57.6	125
EP074-UT: Methylene chloride				75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	90.5	72.3	115
EP074-UT: trans-1,2-Dichloroethene				156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	92.4	60.5	122
EP074-UT: cis-1,2-Dichloroethene				156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	90.2	70.3	112
EP074-UT: Chloroform				67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	94.2	66.6	115
EP074-UT: 1,1,1-Trichloroethane				71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	93.1	64.4	122
EP074-UT: Carbon Tetrachloride				56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	92.8	58.4	127
EP074-UT: 1,2-Dichloroethane				107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	97.0	72.9	114
EP074-UT: Trichloroethene				79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	91.9	64.7	115
EP074-UT: 1,1,2-Trichloroethane				79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	94.2	72.6	116
EP074-UT: Tetrachloroethene				127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	91.4	60.0	119
EP074-UT: 1,1,1,2-Tetrachloroethane				630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	91.8	71.8	116
EP074-UT: 1,1,1,2,2-Tetrachloroethane				79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	93.6	66.1	116
EP074-UT: Hexachlorobutadiene				87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	89.2	39.8	128
EP074-UT: Chlorobenzene				108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	93.1	70.3	113
EP074-UT: 1,4-Dichlorobenzene				106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	94.4	62.6	113
EP074-UT: 1,2-Dichlorobenzene				95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	92.5	70.8	110
EP074-UT: 1,2,4-Trichlorobenzene				120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	94.4	48.4	120
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4256828)											



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB)	Laboratory Control Spike (LCS) Report				
				Report	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
				Result		LCS	Low	High	
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4256828) - continued									
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	93.5	74.5	126	
EP075-EM: 2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	89.3	72.7	126	
EP075-EM: 2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	89.2	73.5	132	
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	87.0	72.8	128	
EP075-EM: 2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	2 mg/kg	91.7	73.3	134	
EP075-EM: 2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	2 mg/kg	89.3	72.4	128	
EP075-EM: 2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	90.2	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	94.3	71.9	128	
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	83.2	54.4	135	
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4256828)									
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	96.7	71.5	130	
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	93.3	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	87.6	70.9	133	
EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	90.3	71.8	132	
EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	94.7	41.0	156	
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	84.3	65.3	134	
EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	81.3	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	83.2	62.0	128	
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	74.2	34.5	137	
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4256828)									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	90.8	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	88.8	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	89.3	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	93.8	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	89.1	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	89.1	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	86.9	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	87.7	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	96.6	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	97.0	75.0	133	
EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	4 mg/kg	88.4	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	87.8	65.1	130	
EP075-EM: Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	88.1	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	88.6	72.9	135	
EP075-EM: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	87.4	71.3	134	
EP075I: Organochlorine Pesticides (QCLot: 4256828)									



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	
EP075I: Organochlorine Pesticides (QLot: 4256828) - continued									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	88.4	71.0	129	
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	88.4	74.8	126	
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	89.0	75.7	130	
EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	2 mg/kg	90.2	70.8	130	
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	93.4	76.5	134	
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	91.3	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	93.9	76.8	130	
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	92.4	73.6	130	
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	88.0	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	88.8	75.3	131	
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	91.1	69.4	134	
EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	87.9	71.0	132	
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	88.7	78.0	133	
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	94.0	69.0	143	
EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	2 mg/kg	68.9	55.7	145	
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	90.4	71.4	135	
EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	91.4	74.8	134	
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	93.5	70.2	135	
EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	91.4	77.7	133	
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	93.2	63.6	135	
EP080/071: Total Petroleum Hydrocarbons (QLot: 4252249)									
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	95.0	61.1	119	
EP080/071: Total Petroleum Hydrocarbons (QLot: 4256829)									
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	760 mg/kg	93.9	74.4	129	
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	3270 mg/kg	93.1	81.0	123	
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1550 mg/kg	92.6	81.8	121	
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	92.8	70.0	130	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QLot: 4252249)									
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	92.5	59.9	119	
EP074-UT: C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTE X	10	mg/kg	<10	----	----	----	----	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QLot: 4256829)									
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1110 mg/kg	97.3	75.4	132	
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	4180 mg/kg	92.3	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	290 mg/kg	109	73.3	136	
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	94.3	70.0	130	
EP231A: Perfluoroalkyl Sulfonic Acids (QLot: 4259525)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	104	72.0	128	



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4259525) - continued									
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	93.8	73.0	123	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	80.8	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	109	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	99.8	68.0	136	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	94.2	59.0	134	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4259525)									
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	96.5	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.6	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.3	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.3	69.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.6	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.5	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	81.0	64.0	136	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.5	69.0	135	
EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	66.0	139	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	77.6	69.0	133	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4259525)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	76.8	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	80.5	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	88.7	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	107	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	63.0	144	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.4	61.0	139	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4259525)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	96.5	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	92.6	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	112	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	117	70.0	130	
EP231P: PFAS Sums (QCLot: 4259525)									
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----	
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----	
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----	



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
						LCS	Low	High	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4258317)									
EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.444 µg/L	95.2	72.0	130	
EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.47 µg/L	96.1	71.0	127	
EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.457 µg/L	96.6	68.0	131	
EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.477 µg/L	99.9	69.0	134	
EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.465 µg/L	102	65.0	140	
EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.482 µg/L	108	53.0	142	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4260789)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	89.6	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	103	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	100	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	99.6	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	87.1	53.0	142	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4260790)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	107	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	93.0	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	95.4	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	96.3	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	94.8	65.0	140	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	107	53.0	142	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4258317)									
EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	2.5 µg/L	101	73.0	129	
EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.5 µg/L	102	72.0	129	
EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.5 µg/L	93.0	72.0	129	
EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.5 µg/L	96.3	72.0	130	
EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.5 µg/L	96.8	71.0	133	
EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.5 µg/L	94.9	69.0	130	
EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.5 µg/L	90.2	71.0	129	
EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.5 µg/L	99.9	69.0	133	
EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.5 µg/L	101	72.0	134	
EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.5 µg/L	97.3	65.0	144	
EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	1.25 µg/L	98.6	71.0	132	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4260789)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	92.2	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	97.3	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	96.6	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	97.4	71.0	133	



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4260789) - continued								
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	101	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	103	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	105	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.5	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	99.5	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4260790)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	94.0	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	100	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	92.4	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	96.5	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	100	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	101	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	83.4	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	92.0	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	105	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	92.4	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4258317)								
EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.5 µg/L	91.7	67.0	137
EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	1.25 µg/L	99.2	68.0	141
EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	1.25 µg/L	102	70.0	130
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	1.25 µg/L	96.6	70.0	130
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	1.25 µg/L	103	70.0	130
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.5 µg/L	94.3	65.0	136
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.5 µg/L	89.2	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4260789)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	102	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
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	90.9	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	107	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: 4260789) - continued									
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	119	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	106	61.0	135	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4260790)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	111	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	118	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	86.7	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	90.3	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	114	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	122	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	101	61.0	135	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4258317)									
EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.469 µg/L	100	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	110	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	102	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	88.6	70.0	130	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4260789)									
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	97.7	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	115	67.0	138	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	90.9	70.0	130	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4260790)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	98.0	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	98.2	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	120	67.0	138	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	124	70.0	130	
EP231P: PFAS Sums (QCLot: 4258317)									
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: 4260789)									
EP231X: Sum of PFAS	----	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: 4260789) - continued								
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: 4260790)								
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	Spike Recovery(%)	Acceptable Limits (%)	
				Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4257736)							
EM2205308-004	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	85.1	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	82.1	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	79.6	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	96.5	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	81.0	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	79.3	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	98.0	80.0	120
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4257739)							
EM2205361-009	SX_OB_20220325_00_08_SS_Primary_ALS	EG005T: Arsenic	7440-38-2	50 mg/kg	79.9	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.6	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	84.3	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	98.6	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	96.3	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	94.0	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	92.0	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4257737)							
EM2205308-004	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	100	76.0	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4257738)							
EM2205361-009	SX_OB_20220325_00_08_SS_Primary_ALS	EG035T: Mercury	7439-97-6	0.5 mg/kg	108	76.0	116
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4256974)							



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
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4256974) - continued							
EM2205241-017	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	76.3	58.0	114
EM2205241-017	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	90.8	58.0	114
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4258138)							
EM2205241-017	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	94.6	70.0	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4258140)							
EM2205361-009	SX_OB_20220325_00_08_SS_Primary_ALS	EK026SF: Total Cyanide	57-12-5	20 mg/kg	92.9	70.0	130
EK040T: Fluoride Total (QCLot: 4256970)							
EM2205308-021	Anonymous	EK040T: Fluoride	16984-48-8	400 mg/kg	97.9	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4256830)							
EM2205353-011	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	124	59.6	152
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4252249)							
EM2205361-002	SX_OB_20220324_08_11_SS_Duplicate_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	80.1	53.7	130
		EP074-UT: Toluene	108-88-3	2 mg/kg	89.8	55.1	124
EP074I: Volatile Halogenated Compounds (QCLot: 4252249)							
EM2205361-002	SX_OB_20220324_08_11_SS_Duplicate_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	44.1	38.4	145
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	77.1	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	84.5	55.5	122
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4256828)							
EM2205241-017	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	100	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	85.5	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	61.4	10.0	144
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4256828)							
EM2205241-017	Anonymous	EP075-EM: Phenol	108-95-2	3 mg/kg	88.9	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	77.8	34.2	129
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4256828)							
EM2205241-017	Anonymous	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	68.6	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	80.3	37.8	152
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4252249)							
EM2205361-002	SX_OB_20220324_08_11_SS_Duplicate_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	80.5	42.3	111
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4256829)							
EM2205353-007	Anonymous	EP071-EM: C10 - C14 Fraction	----	760 mg/kg	96.0	71.3	126
		EP071-EM: C15 - C28 Fraction	----	3270 mg/kg	95.0	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1550 mg/kg	94.0	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	5580 mg/kg	95.3	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4252249)							



Sub-Matrix: SOIL

				Matrix Spike (MS) Report			
				Spike	Spike Recovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4252249) - continued							
EM2205361-002	SX_OB_20220324_08_11_SS_Duplicate_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	78.8	39.9	109
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4256829)							
EM2205353-007	Anonymous	EP071-EM: >C10 - C16 Fraction	----	1110 mg/kg	99.3	71.5	130
		EP071-EM: >C16 - C34 Fraction	----	4180 mg/kg	94.0	76.9	119
		EP071-EM: >C34 - C40 Fraction	----	290 mg/kg	109	65.3	139
		EP071-EM: >C10 - C40 Fraction (sum)	----	5580 mg/kg	96.4	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4259525)							
EM2205361-002	SX_OB_20220324_08_11_SS_Duplicate_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	90.3	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	84.9	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	97.1	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	105	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	101	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	105	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4259525)							
EM2205361-002	SX_OB_20220324_08_11_SS_Duplicate_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	88.6	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	94.7	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	90.3	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	94.5	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	94.9	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	93.2	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	94.9	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	77.2	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	84.2	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	92.0	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	82.4	69.0	133
		EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4259525)					
EM2205361-002	SX_OB_20220324_08_11_SS_Duplicate_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	107	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	92.0	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	79.6	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	80.3	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	109	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	96.1	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	89.0	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: 4259525)							
EM2205361-002	SX_OB_20220324_08_11_SS_Duplicate_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	88.5	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	94.4	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	115	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	116	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: 4258317)							
EM2205510-002	Anonymous	EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.444 µg/L	# 63.6	72.0	130
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.47 µg/L	# 59.8	71.0	127
		EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.457 µg/L	# Not Determined	68.0	131
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.477 µg/L	90.7	69.0	134
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.465 µg/L	# Not Determined	65.0	140
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.482 µg/L	106	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4260789)							
EM2205361-001	SX_OB_20220324_08_07_SS_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	95.7	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	96.1	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	101	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	105	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	87.9	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	82.1	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4260790)							
EM2205361-011	SX_OB_20220324_08_07_SS_Primary_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	102	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	90.2	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	94.2	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	99.8	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	98.9	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	105	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4258317)							
EM2205510-002	Anonymous	EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	2.5 µg/L	109	73.0	129
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.5 µg/L	73.4	72.0	129
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.5 µg/L	# Not Determined	72.0	129
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.5 µg/L	# 67.8	72.0	130
		EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.5 µg/L	# 59.3	71.0	133
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.5 µg/L	95.4	69.0	130



Sub-Matrix: WATER

				Matrix Spike (MS) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike	SpikeRecovery(%)	Acceptable Limits (%)			
				Concentration	MS	Low	High		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4258317) - continued									
EM2205510-002	Anonymous	EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.5 µg/L	92.7	71.0	129		
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.5 µg/L	102	69.0	133		
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.5 µg/L	108	72.0	134		
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.5 µg/L	92.6	65.0	144		
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	1.25 µg/L	106	71.0	132		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4260789)									
EM2205361-001	SX_OB_20220324_08_07_SS_Primary_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	88.8	73.0	129		
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	106	72.0	129		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	105	72.0	129		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	96.2	72.0	130		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	102	71.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	106	69.0	130		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	102	71.0	129		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	93.8	69.0	133		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	95.8	72.0	134		
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	85.5	65.0	144		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	102	71.0	132		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4260790)									
EM2205361-011	SX_OB_20220324_08_07_SS_Primary_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	93.9	73.0	129		
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	96.0	72.0	129		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	93.0	72.0	129		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	95.3	72.0	130		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	97.4	71.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	99.1	69.0	130		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	82.5	71.0	129		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	87.5	69.0	133		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	96.1	72.0	134		
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	110	65.0	144		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	82.1	71.0	132		
		EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4258317)							
		EM2205510-002	Anonymous	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.5 µg/L	101	67.0	137
EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8			1.25 µg/L	110	68.0	141		
EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2			1.25 µg/L	107	70.0	130		
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7			1.25 µg/L	101	70.0	130		
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2			1.25 µg/L	104	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: 4258317) - continued							
EM2205510-002	Anonymous	EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.5 µg/L	110	65.0	136
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.5 µg/L	111	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4260789)							
EM2205361-001	SX_OB_20220324_08_07_SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	107	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	123	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	120	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	95.6	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	115	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	96.0	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	104	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4260790)							
EM2205361-011	SX_OB_20220324_08_07_SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	108	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	111	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	96.6	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	92.2	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	113	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	114	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	107	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4258317)							
EM2205510-002	Anonymous	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.469 µg/L	109	63.0	143
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.476 µg/L	# 54.3	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	105	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4260789)							
EM2205361-001	SX_OB_20220324_08_07_SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	98.9	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	106	64.0	140



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4260789) - continued							
EM2205361-001	SX_OB_20220324_08_07_SS_Primary_ALS	EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	102	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	74.8	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4260790)							
EM2205361-011	SX_OB_20220324_08_07_SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	96.6	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	103	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	110	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	98.3	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EM2205361	Page	: 1 of 13
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: DAVID LAWSON	Telephone	: +6138549 9600
Project	: JC0927	Date Samples Received	: 25-Mar-2022
Site	: 20220325043559-ALS-13	Issue Date	: 01-Apr-2022
Sampler	: Luke D - EP Risk & Tina B Agon	No. of samples received	: 18
Order number	: ----	No. of samples analysed	: 18

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	EM2205510--002	Anonymous	Perfluorobutane sulfonic acid (PFBS)	375-73-5	63.6 %	72.0-130%	Recovery less than lower data quality objective
EP231A: Perfluoroalkyl Sulfonic Acids	EM2205510--002	Anonymous	Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	59.8 %	71.0-127%	Recovery less than lower data quality objective
EP231B: Perfluoroalkyl Carboxylic Acids	EM2205510--002	Anonymous	Perfluoroheptanoic acid (PFHpA)	375-85-9	67.8 %	72.0-130%	Recovery less than lower data quality objective
EP231B: Perfluoroalkyl Carboxylic Acids	EM2205510--002	Anonymous	Perfluorooctanoic acid (PFOA)	335-67-1	59.3 %	71.0-133%	Recovery less than lower data quality objective
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2205510--002	Anonymous	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	54.3 %	64.0-140%	Recovery less than lower data quality objective

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA001: pH in soil using 0.01M CaCl extract							
Soil Glass Jar - Unpreserved (EA001) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	31-Mar-2022	31-Mar-2022		31-Mar-2022	01-Apr-2022
Soil Glass Jar - Unpreserved (EA001) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	31-Mar-2022	01-Apr-2022		31-Mar-2022	01-Apr-2022
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	----	----	----	30-Mar-2022	07-Apr-2022
Soil Glass Jar - Unpreserved (EA055) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	----	----	----	30-Mar-2022	08-Apr-2022



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	31-Mar-2022	20-Sep-2022		31-Mar-2022	20-Sep-2022
Soil Glass Jar - Unpreserved (EG005T) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	31-Mar-2022	21-Sep-2022		31-Mar-2022	21-Sep-2022
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	31-Mar-2022	21-Apr-2022		31-Mar-2022	21-Apr-2022
Soil Glass Jar - Unpreserved (EG035T) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	31-Mar-2022	22-Apr-2022		31-Mar-2022	22-Apr-2022
EG048: Hexavalent Chromium (Alkaline Digest)							
Soil Glass Jar - Unpreserved (EG048G) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	21-Apr-2022		31-Mar-2022	06-Apr-2022
Soil Glass Jar - Unpreserved (EG048G) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	22-Apr-2022		31-Mar-2022	06-Apr-2022
EK026SF: Total CN by Segmented Flow Analyser							
Soil Glass Jar - Unpreserved (EK026SF) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	07-Apr-2022		31-Mar-2022	13-Apr-2022
Soil Glass Jar - Unpreserved (EK026SF) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	08-Apr-2022		31-Mar-2022	13-Apr-2022
EK040T: Fluoride Total							
Soil Glass Jar - Unpreserved (EK040T) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	21-Apr-2022		01-Apr-2022	21-Apr-2022
Soil Glass Jar - Unpreserved (EK040T) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	22-Apr-2022		01-Apr-2022	22-Apr-2022
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)							
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P)							
SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	20-Sep-2022		----	----
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P)							
SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	21-Sep-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_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	20-Sep-2022		----	----	----
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P)								
SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	21-Sep-2022		----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066-EM)								
SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	07-Apr-2022		30-Mar-2022	09-May-2022	
Soil Glass Jar - Unpreserved (EP066-EM)								
SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	08-Apr-2022		30-Mar-2022	09-May-2022	
EP074A: Monocyclic Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	31-Mar-2022		30-Mar-2022	31-Mar-2022	
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	01-Apr-2022		30-Mar-2022	01-Apr-2022	
EP074H: Naphthalene								
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	31-Mar-2022		30-Mar-2022	31-Mar-2022	
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	01-Apr-2022		30-Mar-2022	01-Apr-2022	
EP074I: Volatile Halogenated Compounds								
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	31-Mar-2022		30-Mar-2022	31-Mar-2022	
Soil Glass Jar - Unpreserved (EP074-UT)								
SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	01-Apr-2022		30-Mar-2022	01-Apr-2022	
EP075A: Phenolic Compounds (Halogenated)								
Soil Glass Jar - Unpreserved (EP075-EM)								
SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	07-Apr-2022		30-Mar-2022	09-May-2022	
Soil Glass Jar - Unpreserved (EP075-EM)								
SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	08-Apr-2022		30-Mar-2022	09-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 (Non-halogenated)							
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	07-Apr-2022		30-Mar-2022	09-May-2022
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	08-Apr-2022		30-Mar-2022	09-May-2022
EP075B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	07-Apr-2022		30-Mar-2022	09-May-2022
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	08-Apr-2022		30-Mar-2022	09-May-2022
EP075I: Organochlorine Pesticides							
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	07-Apr-2022		30-Mar-2022	09-May-2022
Soil Glass Jar - Unpreserved (EP075-EM) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	08-Apr-2022		30-Mar-2022	09-May-2022
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074-UT) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	31-Mar-2022		30-Mar-2022	31-Mar-2022
Soil Glass Jar - Unpreserved (EP074-UT) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	01-Apr-2022		30-Mar-2022	01-Apr-2022
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP074-UT) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	30-Mar-2022	31-Mar-2022		30-Mar-2022	31-Mar-2022
Soil Glass Jar - Unpreserved (EP074-UT) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	30-Mar-2022	01-Apr-2022		30-Mar-2022	01-Apr-2022
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	31-Mar-2022	20-Sep-2022		31-Mar-2022	10-May-2022
HDPE Soil Jar (EP231X) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	31-Mar-2022	21-Sep-2022		31-Mar-2022	10-May-2022



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	31-Mar-2022	20-Sep-2022		31-Mar-2022	10-May-2022
HDPE Soil Jar (EP231X) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	31-Mar-2022	21-Sep-2022		31-Mar-2022	10-May-2022
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	31-Mar-2022	20-Sep-2022		31-Mar-2022	10-May-2022
HDPE Soil Jar (EP231X) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	31-Mar-2022	21-Sep-2022		31-Mar-2022	10-May-2022
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	31-Mar-2022	20-Sep-2022		31-Mar-2022	10-May-2022
HDPE Soil Jar (EP231X) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	31-Mar-2022	21-Sep-2022		31-Mar-2022	10-May-2022
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS	24-Mar-2022	31-Mar-2022	20-Sep-2022		31-Mar-2022	10-May-2022
HDPE Soil Jar (EP231X) SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220325_04_18_SS_Primary_ALS	25-Mar-2022	31-Mar-2022	21-Sep-2022		31-Mar-2022	10-May-2022

Matrix: WATER

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

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



Matrix: WATER

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-INJ) SX_OB_20220324_08_36_SB_Blank_ALS,	SX_OB_20220324_08_33_SR_Rinsate_ALS	24-Mar-2022	30-Mar-2022	20-Sep-2022		30-Mar-2022	20-Sep-2022
HDPE (no PTFE) (EP231X) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS, SX_OB_20220325_00_08_SS_Primary_ALS, SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS, SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220325_04_18_SS_Primary_ALS, SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220325_04_18_SS_Primary_ALS	30-Mar-2022	31-Mar-2022	26-Sep-2022		31-Mar-2022	26-Sep-2022
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-INJ) SX_OB_20220324_08_36_SB_Blank_ALS,	SX_OB_20220324_08_33_SR_Rinsate_ALS	24-Mar-2022	30-Mar-2022	20-Sep-2022		30-Mar-2022	20-Sep-2022
HDPE (no PTFE) (EP231X) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS, SX_OB_20220325_00_08_SS_Primary_ALS, SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS, SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220325_04_18_SS_Primary_ALS, SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220325_04_18_SS_Primary_ALS	30-Mar-2022	31-Mar-2022	26-Sep-2022		31-Mar-2022	26-Sep-2022
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-INJ) SX_OB_20220324_08_36_SB_Blank_ALS,	SX_OB_20220324_08_33_SR_Rinsate_ALS	24-Mar-2022	30-Mar-2022	20-Sep-2022		30-Mar-2022	20-Sep-2022
HDPE (no PTFE) (EP231X) SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS, SX_OB_20220325_00_08_SS_Primary_ALS, SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS, SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220325_04_18_SS_Primary_ALS, SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220325_04_18_SS_Primary_ALS	30-Mar-2022	31-Mar-2022	26-Sep-2022		31-Mar-2022	26-Sep-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_20220324_08_36_SB_Blank_ALS,	SX_OB_20220324_08_33_SR_Rinsate_ALS	24-Mar-2022	30-Mar-2022	20-Sep-2022		30-Mar-2022	20-Sep-2022	
HDPE (no PTFE) (EP231X)								
SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS, SX_OB_20220325_00_08_SS_Primary_ALS, SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS, SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220325_04_18_SS_Primary_ALS, SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220325_04_18_SS_Primary_ALS	30-Mar-2022	31-Mar-2022	26-Sep-2022		31-Mar-2022	26-Sep-2022	
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X-INJ)								
SX_OB_20220324_08_36_SB_Blank_ALS,	SX_OB_20220324_08_33_SR_Rinsate_ALS	24-Mar-2022	30-Mar-2022	20-Sep-2022		30-Mar-2022	20-Sep-2022	
HDPE (no PTFE) (EP231X)								
SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS, SX_OB_20220325_00_08_SS_Primary_ALS, SX_OB_20220324_08_07_SS_Primary_ALS, SX_OB_20220324_12_18_SS_Primary_ALS, SX_OB_20220324_16_27_SS_Triplicate_ALS, SX_OB_20220325_00_08_SS_Primary_ALS,	SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220325_04_18_SS_Primary_ALS, SX_OB_20220324_08_11_SS_Duplicate_ALS, SX_OB_20220324_16_35_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220324_20_13_SS_Primary_ALS, SX_OB_20220325_04_18_SS_Primary_ALS	30-Mar-2022	31-Mar-2022	26-Sep-2022		31-Mar-2022	26-Sep-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	Regular	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	2	20	10.00	10.00		NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	20	10.00	10.00		NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	10.00		NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	20	10.00	10.00		NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	2	20	10.00	10.00		NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	4	40	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	4	37	10.81	10.00		NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	40	10.00	10.00		NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	2	20	10.00	10.00		NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	8	12.50	10.00		NEPM 2013 B3 & ALS QC Standard
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	20	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	20	10.00	10.00		NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	20	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	40	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	2	37	5.41	5.00		NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	40	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	20	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	8	12.50	5.00		NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Deionised Water Leach - Plastic Leaching Vessel	EN60-Dia-P	1	8	12.50	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	20	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	20	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	40	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	2	37	5.41	5.00		NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	40	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	20	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	8	12.50	5.00		NEPM 2013 B3 & ALS QC Standard



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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
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	20	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	20	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	40	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	2	37	5.41	5.00		NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	40	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	20	5.00	5.00		NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	8	12.50	5.00		NEPM 2013 B3 & ALS QC Standard

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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	20	15.00	10.00		NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	9	11.11	10.00		NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	5.00		NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	9	11.11	5.00		NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	5.00		NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	9	11.11	5.00		NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	5.00		NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	9	11.11	5.00		NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
pH in soil using a 0.01M CaCl 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 C ₁₀ - C ₄₀ .
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 CaCl2 extract	EA001-PR	SOIL	In house: Referenced to Rayment and Lyons 4B1, 10 g of soil is mixed with 50 mL of 0.01M CaCl2 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, Na2SO4 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			
CUENT: Allon Environmental		SAMPLER Emma.S - EP Risk	
ADDRESS / OFFICE: Melbourne		MOBILE 1: +61 400 820 907 / Craia Trimbur	
PROJECT MANAGER (PM): Craia Trimbur		MOBILE 2: +61490411 0041 David Lawson	
PROJECT ID: JC0927		EMAIL REPORT TO: Lab.....orts.TST1@aonenviro.com.au anonenvironmental(f)esdat.com.au	
SITE: 20220326052546-ALS-14 P.O. NO.:		motherhublabresults1@wgti.1.com.au Amrit.Kaur@anile-analvtics.com.au	
RESULTS REQUIRED (Date): 5 days QUOTE NO.: ME-150-19 WGTP		EMAIL INVOICE TO: (If different report) La1;frei;1orts.TST@aonenviro.com.au agonenvironmental@esdat.com.au	

Environmental Division
Melbourne
Work Order Reference
EM2205462



Telephone: 61-3-8649 9600

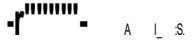
COMMENTS / SPECIAL INSTRUCTIONS / STORAGE OR DISPOSAL							ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)										Notes:										
SAMPLE INFORMATION							ANALYSIS INFORMATION																				
ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type/ Code	Total bottles	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	SX_OB_20220325_08_25_SS_Primary_ALS	S	25/03/2022	08:25	Bucket	1	x	x	x	x	x																
	sx_OB_20220325_08_27_SS_Duplicate_ALS	S	25/03/2022	08:27	Bucker	1	x	x	x	x	x																
	SX_OB_20220325_08_45_SR_Primary_ALS	W	25/03/2022	08:45	Bottle	1					x																
	SX_OB_20220325_08_46_5B_Primary_ALS	W	25/03/2022	08:46	Bottle	1					x																

RELINQUISHMENT				RECEIVED BY				METHOD OF SHIPMENT			
Name:	Date:	Name:	Date:	Name:	Date:	Name:	Date:	Con' Note No:			
Of:	Time:	Of:	Time:	Of:	Time:	Of:	Time:				
Name:	Date:	Name:	Date:	Name:	Date:	Name:	Date:	Transf. Port Co:			
Of:	Time:	Of:	Time:	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 Bag for Acid Sulphate Soils; B = Unpreserved Bag.

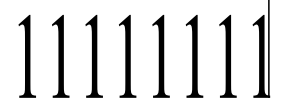
AUSTRALIAN LABORATORY SERVICES P/L

COC Page_1_ of_1_

Received: >b/, & r1 Carrier: w\ky-
C/note:
Temp: \\4f;.C. Sent: Y ,@A
Ice Icebricks :


CHAIN OF CUSTODY DOCUMENTATION							 Australian Laboratory Services Pty Ltd											
CLIENT: Aeon Environmental			SAMPLER: Emma.S - EP Risk															
ADDRESS / OFFICE: Melbourne			MOBILE 1: +61 400 626 907 (Craig Trimbur)															
PROJECT MANAGER (PM): Craig Trimbur			MOBILE 2: +61490 411 004 (David Lawson)															
PROJECT ID: JC0927			EMAIL REPORT TO: Labreports.TST@lanonenviro.com.au anonenvironmental@esdat.com.au															
SIT.E: 20220326052546-ALS-14			motherhublabresults1@wgl.i.com.au															
P.O. NO.			Amrit.Kaur@agile-analMics.com.au															
RESULTS REQUIRED (Date): 5 days			EMAIL INVOICE TO: (if different to report) Labreports.TST@lanonenviro.com.au agonenvironmental@esdat.com.au															
QUOTE NO ME-15Q.19WGTP			ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)															
COMMENTS / SPE... STORAGE nR DIPOSAL:			Notes:															
SAMPLER INFORMATION note: - SOIL W=V1 at... CONTAINER: R... ATIFIN																		
ALSID	SAMPLE JD	MATRIX	DATE	Time	Type/Code	Total bottles												
	SX_OB_20220325_08_25_SS_Primary_ALS	S	25/03/2022	08:25	Bucket	1	X	X	X	X								
	SX_OB_20220325_08_27_SS_Duplicate_ALS	S	25/03/2022	08:27	Bucker	1	X	X	X	X								
	SX_OB_20220325_08_45_SR_Primary_ALS	W	25/03/2022	08:45	Bottle	1			X									
	sx_OB_20220325_08_46_5B_Primary_ALS	W	25/03/2022	08:46	Bottle	1			X									
RECEIVED BY							RECEIVED BY							MODE OF SHIPMENT				
Name:			Date: 1,6 / 2022				Name:			Date:				Con' Note No:				
Of:			Time:				Of:			Time:				Transport Co:				
Name:			Date:				Name:			Date:				Transport Co:				
Of:			Time:				Of:			Time:				Transport Co:				
Water Container CodeS: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; V = VOA Vial HCl Preserved; VS = VOA Vial Sulphuric Preserved; SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Spectation bottle; SP = Sulfuric 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																		

Environmental Division
Melbourne
Work Order Reference
EM2205462



Telephone: +61-3-8549 9600

AUSTRALIAN LABORATORY SERVICES P/L

coc Page_1_of_1_

Received: >b/3, C, 1 Carrier: CbfA/Y'IC, -
C/note:
Temp: \\' -:-'C Seal: Y
Ice / Icebricks ,
A
''(M.,\, _ .A L 'S



CERTIFICATE OF ANALYSIS

Work Order : EM2205462
Client : AGON ENVIRONMENTAL PTY LTD
Contact : Craig Trimbur
Address : D1.1 63-85 TURNER STREET
PORT MELBOURNE 3207
Telephone : ----
Project : JC0927
Order number : ----
C-O-C number : 20220326052546-ALS-14
Sampler : Emma S - EP
Site : 20220326052546-ALS-14
Quote number : EN/150/19 -WGTP -Bulk Sample Quote
No. of samples received : 6
No. of samples analysed : 6

Page : 1 of 17
Laboratory : Environmental Division Melbourne
Contact : Bronwyn Sheen
Address : 4 Westall Rd Springvale VIC Australia 3171
Telephone : +6138549 9600
Date Samples Received : 26-Mar-2022 09:20
Date Analysis Commenced : 31-Mar-2022
Issue Date : 04-Apr-2022 20:16



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

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

This Certificate of Analysis contains the following information:

- General Comments
Analytical Results
Surrogate Control Limits

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

Signatories

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

Table with 3 columns: Signatories, Position, Accreditation Category. Rows include Dilani Fernando (Laboratory Coordinator), Xing Lin (Senior Organic Chemist), and Xing Lin (Senior Organic Chemist).



General Comments

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

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

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

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

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

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

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

- EP231X: Poor matrix spike recovery for sample EM2205462-005 due to sample matrix interference.
- EG048G: EM2205462 #1-2 Result for Hexavalent Chromium has been confirmed by re-extraction and re-analysis.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP074-UT: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074-WF: Where reported, Sum of trichlorobenzenes is the sum of the reported concentrations of 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene, and 1,3,5-Trichlorobenzene at or above the LOR.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.
- EN60: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.
- EN60-DI: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220325_08 _25_SS_Primary_ALS	SX_OB_20220325_08 _27_SS_Duplicate_ALS	----	----	----
Sampling date / time				25-Mar-2022 08:25	25-Mar-2022 08:27	----	----	----
Compound	CAS Number	LOR	Unit	EM2205462-001	EM2205462-002	-----	-----	-----
				Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----



Analytical Results

Sub-Matrix: ASLP LEACHATE
 (Matrix: WATER)

Sample ID

				SX_OB_20220325_08 _25_SS_Primary_ALS	SX_OB_20220325_08 _27_SS_Duplicate_AL S	----	----	----
Sampling date / time				25-Mar-2022 08:25	25-Mar-2022 08:27	----	----	----
Compound	CAS Number	LOR	Unit	EM2205462-001	EM2205462-002	-----	-----	-----
				Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----
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	%	108	101	----	----	----
13C8-PFOA	----	0.02	%	102	104	----	----	----



Analytical Results

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

Sample ID

				SX_OB_20220325_08 _25_SS_Primary_ALS DI	SX_OB_20220325_08 _27_SS_Duplicate_AL S DI	----	----	----
Sampling date / time				25-Mar-2022 08:25	25-Mar-2022 08:27	----	----	----
Compound	CAS Number	LOR	Unit	EM2205462-005	EM2205462-006	-----	-----	-----
				Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----



Analytical Results

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

Sample ID

				SX_OB_20220325_08 _25_SS_Primary_ALS DI	SX_OB_20220325_08 _27_SS_Duplicate_AL S DI	----	----	----
Sampling date / time				25-Mar-2022 08:25	25-Mar-2022 08:27	----	----	----
Compound	CAS Number	LOR	Unit	EM2205462-005	EM2205462-006	-----	-----	-----
				Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----
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	%	97.3	96.4	----	----	----
13C8-PFOA	----	0.02	%	94.6	95.4	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220325_08 _25_SS_Primary_ALS	SX_OB_20220325_08 _27_SS_Duplicate_AL S	SX_OB_20220325_08 _25_SS_Primary_ALS DI	SX_OB_20220325_08 _27_SS_Duplicate_AL S DI	----
Sampling date / time				25-Mar-2022 08:25	25-Mar-2022 08:27	25-Mar-2022 08:25	25-Mar-2022 08:27	----
Compound	CAS Number	LOR	Unit	EM2205462-001	EM2205462-002	EM2205462-005	EM2205462-006	-----
				Result	Result	Result	Result	----
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	7.6	7.6	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	27.4	28.4	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	30	33	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	----	----
Chromium	7440-47-3	2	mg/kg	102	114	----	----	----
Copper	7440-50-8	5	mg/kg	54	56	----	----	----
Lead	7439-92-1	5	mg/kg	<5	<5	----	----	----
Molybdenum	7439-98-7	2	mg/kg	<2	<2	----	----	----
Nickel	7440-02-0	2	mg/kg	175	178	----	----	----
Selenium	7782-49-2	5	mg/kg	<5	<5	----	----	----
Silver	7440-22-4	2	mg/kg	<2	<2	----	----	----
Tin	7440-31-5	5	mg/kg	<5	<5	----	----	----
Zinc	7440-66-6	5	mg/kg	101	94	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	----	----
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	0.9	1.2	----	----	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	<1	<1	----	----	----
EK040T: Fluoride Total								
Fluoride	16984-48-8	40	mg/kg	130	160	----	----	----
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Initial pH	----	0.1	pH Unit	8.8	8.9	----	----	----
After HCl pH	----	0.1	pH Unit	1.2	1.2	----	----	----
Extraction Fluid pH	----	0.1	pH Unit	5.0	5.0	----	----	----
Final pH	----	0.1	pH Unit	5.0	4.9	----	----	----
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)								
Final pH	----	0.1	pH Unit	----	----	9.3	9.4	----
EP066: Polychlorinated Biphenyls (PCB)								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220325_08 _25_SS_Primary_ALS	SX_OB_20220325_08 _27_SS_Duplicate_AL S	SX_OB_20220325_08 _25_SS_Primary_ALS DI	SX_OB_20220325_08 _27_SS_Duplicate_AL S DI	----
Sampling date / time				25-Mar-2022 08:25	25-Mar-2022 08:27	25-Mar-2022 08:25	25-Mar-2022 08:27	----
Compound	CAS Number	LOR	Unit	EM2205462-001	EM2205462-002	EM2205462-005	EM2205462-006	-----
				Result	Result	Result	Result	----
EP066: Polychlorinated Biphenyls (PCB) - Continued								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.2	mg/kg	<0.2	<0.2	----	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	----	----
EP074I: Volatile Halogenated Compounds								
Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	<0.02	----	----	----
1,1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	<0.01	----	----	----
Methylene chloride	75-09-2	0.4	mg/kg	<0.4	<0.4	----	----	----
trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	<0.02	----	----	----
cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	<0.01	----	----	----
Chloroform	67-66-3	0.02	mg/kg	<0.02	<0.02	----	----	----
1,1,1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	<0.01	----	----	----
Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	<0.01	----	----	----
1,2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	<0.02	----	----	----
Trichloroethene	79-01-6	0.02	mg/kg	<0.02	<0.02	----	----	----
1,1,2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	<0.04	----	----	----
Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	<0.02	----	----	----
1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	<0.01	----	----	----
1,1,2,2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	<0.02	----	----	----
Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	<0.02	----	----	----
Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	<0.02	----	----	----
1,4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	<0.02	----	----	----
1,2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	<0.02	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220325_08 _25_SS_Primary_ALS	SX_OB_20220325_08 _27_SS_Duplicate_AL S	SX_OB_20220325_08 _25_SS_Primary_ALS DI	SX_OB_20220325_08 _27_SS_Duplicate_AL S DI	----
Sampling date / time				25-Mar-2022 08:25	25-Mar-2022 08:27	25-Mar-2022 08:25	25-Mar-2022 08:27	----
Compound	CAS Number	LOR	Unit	EM2205462-001	EM2205462-002	EM2205462-005	EM2205462-006	-----
				Result	Result	Result	Result	----
EP074I: Volatile Halogenated Compounds - Continued								
1,2,4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	<0.01	----	----	----
^ Sum of volatile chlorinated hydrocarbons	----	0.01	mg/kg	<0.01	<0.01	----	----	----
^ Sum of other chlorinated hydrocarbons	----	0.01	mg/kg	<0.01	<0.01	----	----	----
EP075A: Phenolic Compounds (Halogenated)								
2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	<0.03	----	----	----
2,4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	<0.03	----	----	----
2,6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	<0.03	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	<0.03	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	<0.05	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	<0.05	----	----	----
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	----	----	----
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	----	----	----
Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	<0.2	----	----	----
^ Sum of Phenols (halogenated)	----	0.03	mg/kg	<0.03	<0.03	----	----	----
EP075A: Phenolic Compounds (Non-halogenated)								
Phenol	108-95-2	1	mg/kg	<1	<1	----	----	----
2-Methylphenol	95-48-7	1	mg/kg	<1	<1	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	----	----	----
2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	----	----	----
2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	----	----	----
2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	----	----	----
4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	----	----	----
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	----	----	----
Dinoseb	88-85-7	5	mg/kg	<5	<5	----	----	----
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	<5	----	----	----
^ Sum of Phenols (non-halogenated)	----	1	mg/kg	<1	<1	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220325_08 _25_SS_Primary_ALS	SX_OB_20220325_08 _27_SS_Duplicate_AL S	SX_OB_20220325_08 _25_SS_Primary_ALS DI	SX_OB_20220325_08 _27_SS_Duplicate_AL S DI	----
Sampling date / time				25-Mar-2022 08:25	25-Mar-2022 08:27	25-Mar-2022 08:25	25-Mar-2022 08:27	----
Compound	CAS Number	LOR	Unit	EM2205462-001	EM2205462-002	EM2205462-005	EM2205462-006	-----
				Result	Result	Result	Result	----
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	<1.0	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	----	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.03	mg/kg	<0.03	<0.03	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	<0.03	----	----	----
beta-BHC	319-85-7	0.03	mg/kg	<0.03	<0.03	----	----	----
gamma-BHC	58-89-9	0.03	mg/kg	<0.03	<0.03	----	----	----
delta-BHC	319-86-8	0.03	mg/kg	<0.03	<0.03	----	----	----
Heptachlor	76-44-8	0.03	mg/kg	<0.03	<0.03	----	----	----
Aldrin	309-00-2	0.03	mg/kg	<0.03	<0.03	----	----	----
Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	<0.03	----	----	----
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	----	----	----
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	----	----	----
Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	<0.03	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	----	----	----
Dieldrin	60-57-1	0.03	mg/kg	<0.03	<0.03	----	----	----
Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	<0.03	----	----	----
Endrin	72-20-8	0.03	mg/kg	<0.03	<0.03	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220325_08 _25_SS_Primary_ALS	SX_OB_20220325_08 _27_SS_Duplicate_AL S	SX_OB_20220325_08 _25_SS_Primary_ALS DI	SX_OB_20220325_08 _27_SS_Duplicate_AL S DI	----
Sampling date / time				25-Mar-2022 08:25	25-Mar-2022 08:27	25-Mar-2022 08:25	25-Mar-2022 08:27	----
Compound	CAS Number	LOR	Unit	EM2205462-001	EM2205462-002	EM2205462-005	EM2205462-006	-----
				Result	Result	Result	Result	----
EP075I: Organochlorine Pesticides - Continued								
Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	<0.03	----	----	----
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	<0.03	----	----	----
4,4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	----	----	----
Methoxychlor	72-43-5	0.03	mg/kg	<0.03	<0.03	----	----	----
^ Sum of organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.03	mg/kg	<0.03	<0.03	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	----	----	----
^ Chlordane	57-74-9	0.03	mg/kg	<0.03	<0.03	----	----	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	<0.03	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	----	----
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	----	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 201								
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	----
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	----	----	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220325_08 _25_SS_Primary_ALS	SX_OB_20220325_08 _27_SS_Duplicate_AL S	SX_OB_20220325_08 _25_SS_Primary_ALS DI	SX_OB_20220325_08 _27_SS_Duplicate_AL S DI	----
Sampling date / time				25-Mar-2022 08:25	25-Mar-2022 08:27	25-Mar-2022 08:25	25-Mar-2022 08:27	----
Compound	CAS Number	LOR	Unit	EM2205462-001	EM2205462-002	EM2205462-005	EM2205462-006	-----
				Result	Result	Result	Result	----
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220325_08 _25_SS_Primary_ALS	SX_OB_20220325_08 _27_SS_Duplicate_ALS	SX_OB_20220325_08 _25_SS_Primary_ALS DI	SX_OB_20220325_08 _27_SS_Duplicate_ALS DI	----
Sampling date / time				25-Mar-2022 08:25	25-Mar-2022 08:27	25-Mar-2022 08:25	25-Mar-2022 08:27	----
Compound	CAS Number	LOR	Unit	EM2205462-001	EM2205462-002	EM2205462-005	EM2205462-006	-----
				Result	Result	Result	Result	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	104	108	----	----	----
EP074S: VOC Surrogates (Ultra-Trace)								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	84.8	81.2	----	----	----
Toluene-D8	2037-26-5	0.1	%	83.3	78.1	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	93.3	92.3	----	----	----
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	72.9	81.4	----	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%	74.9	84.1	----	----	----
2,4,6-Tribromophenol	118-79-6	0.025	%	77.6	77.1	----	----	----
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				SX_OB_20220325_08 _25_SS_Primary_ALS	SX_OB_20220325_08 _27_SS_Duplicate_AL S	SX_OB_20220325_08 _25_SS_Primary_ALS DI	SX_OB_20220325_08 _27_SS_Duplicate_AL S DI	----
Sampling date / time				25-Mar-2022 08:25	25-Mar-2022 08:27	25-Mar-2022 08:25	25-Mar-2022 08:27	----
Compound	CAS Number	LOR	Unit	EM2205462-001	EM2205462-002	EM2205462-005	EM2205462-006	-----
				Result	Result	Result	Result	----
EP075T: Base/Neutral Extractable Surrogates (Waste Classification) - Continued								
Nitrobenzene-D5	4165-60-0	0.025	%	74.9	83.5	----	----	----
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%	73.8	78.1	----	----	----
2-Fluorobiphenyl	321-60-8	0.025	%	79.8	84.3	----	----	----
Anthracene-d10	1719-06-8	0.025	%	84.5	88.9	----	----	----
4-Terphenyl-d14	1718-51-0	0.025	%	74.4	77.4	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	101	104	----	----	----
13C8-PFOA	----	0.0002	%	97.8	106	----	----	----



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				SX_OB_20220325_08 _45_SR_Primary_ALS	SX_OB_20220325_08 _46_SB_Primary_ALS	----	----	----
Sampling date / time				25-Mar-2022 08:45	25-Mar-2022 08:46	----	----	----
Compound	CAS Number	LOR	Unit	EM2205462-003	EM2205462-004	-----	-----	-----
				Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	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_20220325_08 _45_SR_Primary_ALS	SX_OB_20220325_08 _46_SB_Primary_ALS	----	----	----
Sampling date / time				25-Mar-2022 08:45	25-Mar-2022 08:46	----	----	----	
Compound	CAS Number	LOR	Unit	EM2205462-003	EM2205462-004	-----	-----	-----	
				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	%	92.1	99.4	----	----	----	
13C8-PFOA	----	0.02	%	100	103	----	----	----	



Surrogate Control Limits

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

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

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

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



QUALITY CONTROL REPORT

Work Order : EM2205462
Client : AGON ENVIRONMENTAL PTY LTD
Contact : Craig Trimbur
Address : D1.1 63-85 TURNER STREET
PORT MELBOURNE 3207
Telephone : ----
Project : JC0927
Order number : ----
C-O-C number : 20220326052546-ALS-14
Sampler : Emma S - EP
Site : 20220326052546-ALS-14
Quote number : EN/150/19 -WGTP -Bulk Sample Quote
No. of samples received : 6
No. of samples analysed : 6

Page : 1 of 31
Laboratory : Environmental Division Melbourne
Contact : Bronwyn Sheen
Address : 4 Westall Rd Springvale VIC Australia 3171
Telephone : +6138549 9600
Date Samples Received : 26-Mar-2022
Date Analysis Commenced : 31-Mar-2022
Issue Date : 04-Apr-2022



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.

Table with 3 columns: Signatories, Position, Accreditation Category. Rows include Dilani Fernando (Laboratory Coordinator), Xing Lin (Senior Organic Chemist), and Xing Lin (Senior Organic Chemist).



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: 4260554)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	102	106	3.7	0% - 20%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	175	158	10.3	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	30	42	33.7	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	54	52	2.3	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	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	101	84	18.1	0% - 20%
EM2205473-006	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	104	107	2.8	0% - 20%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<5	<5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	169	158	6.7	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	24	29	20.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	68	57	17.7	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	110	106	3.6	0% - 20%

EA001: pH in soil using 0.01M CaCl extract (QC Lot: 4260574)



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: 4260574) - continued									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EA001: pH (CaCl2)	----	0.1	pH Unit	7.6	7.6	0.0	0% - 20%
EM2205473-006	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.6	7.6	0.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4259844)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EA055: Moisture Content	----	0.1	%	27.4	28.9	5.3	0% - 20%
EM2205473-007	Anonymous	EA055: Moisture Content	----	0.1	%	39.3	38.2	3.0	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4260555)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2205473-006	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: 4260576)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	0.9	0.7	20.8	No Limit
EM2205473-006	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: 4263014)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EM2205473-006	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<5	<5	0.0	No Limit
EK040T: Fluoride Total (QC Lot: 4260551)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EK040T: Fluoride	16984-48-8	40	mg/kg	130	160	22.5	No Limit
EM2205473-006	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	220	170	25.1	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4259617)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2205473-007	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 4259604)									
EM2205462-001	SX_OB_20220325_08_25_ 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: 4259604)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP074I: Volatile Halogenated Compounds (QC Lot: 4259604)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EP074-UT: 1.1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	<0.01	0.0	No Limit
		EP074-UT: cis-1.2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	<0.01	0.0	No Limit
		EP074-UT: 1.1.1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	<0.01	0.0	No Limit
		EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	<0.01	0.0	No Limit
		EP074-UT: 1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	<0.01	0.0	No Limit
		EP074-UT: 1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	<0.01	0.0	No Limit
		EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	<0.02	0.0	No Limit
		EP074-UT: trans-1.2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	<0.02	0.0	No Limit
		EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	<0.02	0.0	No Limit
		EP074-UT: 1.2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	<0.02	0.0	No Limit
		EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	<0.02	0.0	No Limit
		EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	<0.02	0.0	No Limit
		EP074-UT: 1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	<0.02	0.0	No Limit
		EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	<0.02	0.0	No Limit
		EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	<0.02	0.0	No Limit
		EP074-UT: 1.4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	<0.02	0.0	No Limit
EP074-UT: 1.2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	<0.02	0.0	No Limit		
EP074-UT: 1.1.2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	<0.04	0.0	No Limit		
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	<0.4	0.0	No Limit		
EP075A: Phenolic Compounds (Halogenated) (QC Lot: 4259615)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
EM2205473-007	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



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: 4259615) - continued									
EM2205473-007	Anonymous	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: 4259615)									
EM2205462-001	SX_OB_20220325_08_25_ 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	<5	<5	0.0	No Limit
EM2205473-007	Anonymous	EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.0	No Limit
		EP075-EM: 2.4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: 2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.0	No Limit
		EP075-EM: Dinoseb	88-85-7	5	mg/kg	<20	<20	0.0	No Limit
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4259615)	SX_OB_20220325_08_25_ 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



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: 4259615) - continued									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	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
EM2205473-007	Anonymous	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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: 4259615)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	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		



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: 4259615) - continued									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	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
EM2205473-007	Anonymous	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.0	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.05	<0.05	0.0	No Limit
		EP075-EM: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4259604)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4259616)									
EM2205462-001	SX_OB_20220325_08_25_ 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
EM2205473-007	Anonymous	EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071-EM: C10 - C14 Fraction	----	50	mg/kg	70	110	47.0	No Limit
		EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	70	110	44.4	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4259604)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
		EP074-UT: C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	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 (%)
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4259616)									
EM2205462-001	SX_OB_20220325_08_25_ 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
EM2205473-007	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	80	140	46.5	No Limit
		EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	80	140	54.5	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4261749)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	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
EM2205473-007	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4261749)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	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 (PFTTeDA)	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
EM2205473-007	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4261749) - continued									
EM2205473-007	Anonymous	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
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4261749)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	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
EM2205473-007	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4261749)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	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: 4261749) - continued									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	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
EM2205473-007	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4261749)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	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
EM2205473-007	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	<50.0 µg/kg	<0.0500	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<5.0 µg/kg	<0.0050	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<10.0 µg/kg	<0.0100	0.0	No Limit
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4260804)									
EM2205201-001	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
EM2205201-011	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4263003)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4263003) - continued									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2205473-006	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit		
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 4263006)									
EM2205398-006	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EM2205473-010	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4260804)									
EM2205201-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EM2205201-011	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit



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: 4260804) - continued									
EM2205201-011	Anonymous	EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (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
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4263003)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EM2205473-006	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (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
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 4263006)									
EM2205398-006	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit



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: 4263006) - continued									
EM2205398-006	Anonymous	EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EM2205473-010	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4260804)							
EM2205201-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2205201-011	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit



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: 4260804) - continued									
EM2205201-011	Anonymous	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: 4263003)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2205473-006	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 4263006)									
EM2205398-006	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit



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: 4263006) - continued									
EM2205398-006	Anonymous	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
EM2205473-010	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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4260804)									
EM2205201-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2205201-011	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4263003)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4263003) - continued									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2205473-006	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 4263006)									
EM2205398-006	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EM2205473-010	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4260804)									
EM2205201-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2205201-011	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4263003)									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231P: PFAS Sums (QC Lot: 4263003) - continued									
EM2205462-001	SX_OB_20220325_08_25_ SS_Primary_ALS	EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2205473-006	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763- 23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 4263006)									
EM2205398-006	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763- 23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EM2205473-010	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763- 23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.05	<0.05	0.0	No Limit



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

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

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike	Spike Recovery (%)	Acceptable Limits (%)	
					Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4260554)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	94.4	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	62.0	50.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	106	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	90.3	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	90.8	70.0	130
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	2.19 mg/kg	93.2	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	93.7	70.0	130
EG005T: Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----
EG005T: Silver	7440-22-4	2	mg/kg	<2	2.9 mg/kg	73.2	70.0	130
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.33 mg/kg	116	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	74.1	70.0	130
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel) (QCLot: 4260851)								
EN60-DIa-P: Final pH	----	0.1	pH Unit	6.9	----	----	----	----
EA001: pH in soil using 0.01M CaCl extract (QCLot: 4260574)								
EA001: pH (CaCl ₂)	----	----	pH Unit	----	4 pH Unit	101	98.8	101
					7 pH Unit	100	99.3	101
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4260555)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	83.6	70.0	130
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4260576)								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	87.4	70.0	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4263014)								
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	83.2	70.0	130
EK040T: Fluoride Total (QCLot: 4260551)								
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	98.5	75.2	110
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4259617)								
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	120	67.4	136
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4259604)								
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	87.2	69.2	116
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	85.0	67.7	116
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	83.2	66.6	115
EP074-UT: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	4.2 mg/kg	81.8	65.2	112
	106-42-3							
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	82.7	69.4	111



Sub-Matrix: SOIL

Method: Compound				CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
							Result	Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4259604) - continued											
EP074-UT: ortho-Xylene				95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	81.6	68.4	110
EP074H: Naphthalene (QCLot: 4259604)											
EP074-UT: Naphthalene				91-20-3	1	mg/kg	<1	0.6 mg/kg	77.2	72.3	114
EP074I: Volatile Halogenated Compounds (QCLot: 4259604)											
EP074-UT: Vinyl chloride				75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	94.3	47.0	138
EP074-UT: 1,1-Dichloroethene				75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	84.0	57.6	125
EP074-UT: Methylene chloride				75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	86.0	72.3	115
EP074-UT: trans-1,2-Dichloroethene				156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	84.5	60.5	122
EP074-UT: cis-1,2-Dichloroethene				156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	86.3	70.3	112
EP074-UT: Chloroform				67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	88.0	66.6	115
EP074-UT: 1,1,1-Trichloroethane				71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	85.8	64.4	122
EP074-UT: Carbon Tetrachloride				56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	83.8	58.4	127
EP074-UT: 1,2-Dichloroethane				107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	92.6	72.9	114
EP074-UT: Trichloroethene				79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	84.3	64.7	115
EP074-UT: 1,1,2-Trichloroethane				79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	90.9	72.6	116
EP074-UT: Tetrachloroethene				127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	82.3	60.0	119
EP074-UT: 1,1,1,2-Tetrachloroethane				630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	87.3	71.8	116
EP074-UT: 1,1,1,2,2-Tetrachloroethane				79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	91.6	66.1	116
EP074-UT: Hexachlorobutadiene				87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	89.8	39.8	128
EP074-UT: Chlorobenzene				108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	87.6	70.3	113
EP074-UT: 1,4-Dichlorobenzene				106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	85.5	62.6	113
EP074-UT: 1,2-Dichlorobenzene				95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	87.6	70.8	110
EP074-UT: 1,2,4-Trichlorobenzene				120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	94.5	48.4	120
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4259615)											
EP075-EM: 2-Chlorophenol				95-57-8	0.03	mg/kg	<0.03	2 mg/kg	102	74.5	126
EP075-EM: 2,4-Dichlorophenol				120-83-2	0.03	mg/kg	<0.03	2 mg/kg	91.4	72.7	126
EP075-EM: 2,6-Dichlorophenol				87-65-0	0.03	mg/kg	<0.03	2 mg/kg	91.1	73.5	132
EP075-EM: 4-Chloro-3-methylphenol				59-50-7	0.03	mg/kg	<0.03	2 mg/kg	91.4	72.8	128
EP075-EM: 2,4,5-Trichlorophenol				95-95-4	0.05	mg/kg	<0.05	2 mg/kg	92.4	73.3	134
EP075-EM: 2,4,6-Trichlorophenol				88-06-2	0.05	mg/kg	<0.05	2 mg/kg	90.4	72.4	128
EP075-EM: 2,3,5,6-Tetrachlorophenol				935-95-5	0.03	mg/kg	<0.03	2 mg/kg	90.0	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	93.8	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: 4259615)											
EP075-EM: Phenol				108-95-2	1	mg/kg	<1	2 mg/kg	105	71.5	130
EP075-EM: 2-Methylphenol				95-48-7	1	mg/kg	<1	2 mg/kg	89.9	73.4	129
EP075-EM: 3- & 4-Methylphenol				1319-77-3	1	mg/kg	<1	4 mg/kg	89.8	74.3	129



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	
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4259615) - continued									
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	89.3	70.9	133	
EP075-EM: 2,4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	91.9	71.8	132	
EP075-EM: 2,4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	61.9	41.0	156	
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	90.8	65.3	134	
EP075-EM: 2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	82.9	43.6	128	
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	86.4	62.0	128	
EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	73.6	34.5	137	
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4259615)									
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	94.8	73.0	131	
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	95.6	76.3	130	
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	94.7	72.0	135	
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	97.4	74.4	131	
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	97.4	73.3	130	
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	96.5	78.4	127	
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	95.8	75.3	132	
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	96.9	75.4	130	
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	95.6	69.6	133	
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	100	75.0	133	
EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	4 mg/kg	100	75.8	133	
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	99.0	65.1	130	
EP075-EM: Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	100	72.1	134	
EP075-EM: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	99.5	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: 4259615)									
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	95.7	71.0	129	
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	96.2	74.8	126	
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	95.8	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	97.2	76.5	134	
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	94.9	75.5	131	
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	94.4	76.8	130	
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	93.6	73.6	130	
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	93.9	75.0	133	
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	95.0	75.3	131	
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	96.3	69.4	134	
EP075-EM: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	97.8	71.0	132	
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	96.3	78.0	133	
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	91.5	69.0	143	



Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB)	Laboratory Control Spike (LCS) Report				
				Report	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
				Result		LCS	Low	High	
EP075I: Organochlorine Pesticides (QCLot: 4259615) - continued									
EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	2 mg/kg	95.5	55.7	145	
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	97.2	71.4	135	
EP075-EM: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	95.8	74.8	134	
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	96.6	70.2	135	
EP075-EM: 4.4'-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	94.9	77.7	133	
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	96.5	63.6	135	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4259604)									
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	95.0	61.1	119	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4259616)									
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	760 mg/kg	103	74.4	129	
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	3270 mg/kg	103	81.0	123	
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1550 mg/kg	103	81.8	121	
EP071-EM: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	103	70.0	130	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4259604)									
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	92.3	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: 4259616)									
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1110 mg/kg	103	75.4	132	
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	4180 mg/kg	103	80.8	120	
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	290 mg/kg	107	73.3	136	
EP071-EM: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	5580 mg/kg	103	70.0	130	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4261749)									
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	122	72.0	128	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	94.8	73.0	123	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0014 mg/kg	75.8	67.0	130	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	110	70.0	132	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	96.2	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: 4261749)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	87.3	71.0	135	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.6	69.0	132	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.7	70.0	132	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.1	71.0	131	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.1	69.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.6	72.0	129	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	69.0	133	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	81.7	64.0	136	



Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
					LCS	Low	High	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4261749) - continued								
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.0	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	78.4	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	96.5	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4261749)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	92.4	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	92.9	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	83.8	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	98.0	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.2	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.8	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4261749)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	93.9	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00119 mg/kg	96.4	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	108	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	92.8	70.0	130
EP231P: PFAS Sums (QCLot: 4261749)								
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
					LCS	Low	High	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4260804)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	104	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	95.8	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	95.4	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	98.0	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	106	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4263003)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	110	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	91.6	71.0	127



Sub-Matrix: WATER

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4263003) - continued								
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	92.1	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	101	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	106	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	113	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4263006)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	114	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	96.6	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	96.6	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	106	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	104	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	106	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4260804)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	95.4	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	98.3	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	96.4	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	98.3	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	93.0	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	99.0	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	94.7	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	83.6	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	95.7	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	91.6	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	96.6	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4263003)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	87.2	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	95.2	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	98.1	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	95.2	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	94.1	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	97.9	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	92.7	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	83.0	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	92.9	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	90.0	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	85.0	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4263006)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	95.2	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	99.4	72.0	129



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB)	Laboratory Control Spike (LCS) Report				
				Report	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
				Result		LCS	Low	High	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4263006) - continued									
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	100	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	99.8	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.7	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	99.8	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	95.5	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	84.8	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	95.7	72.0	134	
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	90.0	65.0	144	
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	84.1	71.0	132	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4260804)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	93.9	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	115	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	89.0	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	89.2	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	104	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	96.3	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	101	61.0	135	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4263003)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	101	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	97.4	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	85.8	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	89.1	70.0	130	
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	117	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	95.5	65.0	136	
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	103	61.0	135	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4263006)									
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	106	67.0	137	
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	103	68.0	141	
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	88.1	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	85.3	70.0	130	



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB)	Laboratory Control Spike (LCS) Report				
				Report	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
				Result		LCS	Low	High	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4263006) - continued									
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	118	70.0	130	
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	106	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: 4260804)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	97.5	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	98.8	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	107	67.0	138	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	79.9	70.0	130	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4263003)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	98.5	63.0	143	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	101	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	97.7	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	72.7	70.0	130	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4263006)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	112	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	105	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	71.7	70.0	130	
EP231P: PFAS Sums (QCLot: 4260804)									
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: 4263003)									
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: 4263006)									
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**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4260554)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EG005T: Arsenic	7440-38-2	50 mg/kg	81.9	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	89.0	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	95.4	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	92.4	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	88.2	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	78.2	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	85.1	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4260555)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EG035T: Mercury	7439-97-6	0.5 mg/kg	90.3	76.0	116
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 4260576)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	85.4	58.0	114
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	97.8	58.0	114
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 4263014)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EK026SF: Total Cyanide	57-12-5	20 mg/kg	97.4	70.0	130
EK040T: Fluoride Total (QCLot: 4260551)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EK040T: Fluoride	16984-48-8	400 mg/kg	72.7	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4259617)							
EM2205468-002	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	122	59.6	152
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 4259604)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP074-UT: Benzene	71-43-2	2 mg/kg	85.3	53.7	130
		EP074-UT: Toluene	108-88-3	2 mg/kg	84.6	55.1	124
EP074I: Volatile Halogenated Compounds (QCLot: 4259604)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP074-UT: 1,1-Dichloroethene	75-35-4	2 mg/kg	77.7	38.4	145
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	75.9	48.1	128
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	79.9	55.5	122
EP075A: Phenolic Compounds (Halogenated) (QCLot: 4259615)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	86.0	44.0	143
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	81.8	41.5	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	49.9	10.0	144
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 4259615)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP075-EM: Phenol	108-95-2	3 mg/kg	79.4	44.2	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	78.7	34.2	129



Sub-Matrix: SOIL

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 4259615)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	77.1	42.6	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	74.8	37.8	152
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4259604)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	79.2	42.3	111
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4259616)							
EM2205468-001	Anonymous	EP071-EM: C10 - C14 Fraction	----	760 mg/kg	103	71.3	126
		EP071-EM: C15 - C28 Fraction	----	3270 mg/kg	103	75.1	123
		EP071-EM: C29 - C36 Fraction	----	1550 mg/kg	103	78.1	120
		EP071-EM: C10 - C36 Fraction (sum)	----	5580 mg/kg	103	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4259604)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	78.3	39.9	109
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4259616)							
EM2205468-001	Anonymous	EP071-EM: >C10 - C16 Fraction	----	1110 mg/kg	103	71.5	130
		EP071-EM: >C16 - C34 Fraction	----	4180 mg/kg	103	76.9	119
		EP071-EM: >C34 - C40 Fraction	----	290 mg/kg	106	65.3	139
		EP071-EM: >C10 - C40 Fraction (sum)	----	5580 mg/kg	103	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4261749)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	102	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	76.0	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	91.4	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	85.6	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	98.4	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	116	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4261749)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	85.7	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	87.1	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	84.1	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	94.6	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	93.2	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	92.2	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	93.8	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	81.1	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	85.9	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.00125 mg/kg	77.5	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	90.8	69.0	133
		EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4261749)					
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	99.0	67.0	137



Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike Concentration	SpikeRecovery(%) MS	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4261749) - continued							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	83.5	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	82.0	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	82.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	94.1	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	92.4	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	93.7	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4261749)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	83.2	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	105	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	101	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	77.0	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike Concentration	SpikeRecovery(%) MS	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4260804)							
EM2205201-005	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	77.4	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	96.4	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	# Not Determined	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	115	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	94.4	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	108	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4263003)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	96.6	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	81.2	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	94.4	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	93.9	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	103	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	124	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4263006)							
EM2205462-005	SX_OB_20220325_08_25_SS_Primary_ALS_DI	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	98.4	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	81.7	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	94.3	68.0	131



Sub-Matrix: WATER

				Matrix Spike (MS) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike	SpikeRecovery(%)	Acceptable Limits (%)			
				Concentration	MS	Low	High		
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 4263006) - continued									
EM2205462-005	SX_OB_20220325_08_25_SS_Primary_ALS_DI	EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	99.2	69.0	134		
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	95.5	65.0	140		
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	91.9	53.0	142		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4260804)									
EM2205201-005	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	76.0	73.0	129		
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	97.0	72.0	129		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	# Not Determined	72.0	129		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	95.5	72.0	130		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	88.5	71.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	98.1	69.0	130		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	94.5	71.0	129		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	80.2	69.0	133		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	88.8	72.0	134		
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	83.7	65.0	144		
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	85.5	71.0	132				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4263003)									
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	92.9	73.0	129		
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	92.4	72.0	129		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	94.9	72.0	129		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	103	72.0	130		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	96.6	71.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	99.2	69.0	130		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	104	71.0	129		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	86.8	69.0	133		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	108	72.0	134		
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	97.3	65.0	144		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	92.0	71.0	132		
		EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4263006)							
		EM2205462-005	SX_OB_20220325_08_25_SS_Primary_ALS_DI	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	89.1	72.0	129		
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4			0.25 µg/L	86.9	72.0	129		
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9			0.25 µg/L	94.9	72.0	130		
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1			0.25 µg/L	95.2	71.0	133		
EP231X: Perfluorononanoic acid (PFNA)	375-95-1			0.25 µg/L	93.3	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	74.4	69.0	133		
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1			0.25 µg/L	80.8	72.0	134		



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
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 4263006) - continued							
EM2205462-005	SX_OB_20220325_08_25_SS_Primary_ALS_DI	EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	74.8	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	0.625 µg/L	# 70.8	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4260804)							
EM2205201-005	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	88.9	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	105	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	80.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	80.7	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	93.6	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	87.2	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	96.3	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4263003)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	98.5	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	108	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	90.1	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	86.6	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	112	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	102	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	108	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4263006)							
EM2205462-005	SX_OB_20220325_08_25_SS_Primary_ALS_DI	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	96.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	72.8	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	# 52.3	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	79.9	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	98.2	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	85.2	65.0	136



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
Laboratory sample ID		Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery(%) MS	Acceptable Limits (%) Low High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 4263006) - continued							
EM2205462-005	SX_OB_20220325_08_25_SS_Primary_ALS_DI	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	85.5	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4260804)							
EM2205201-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	98.6	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	97.2	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	100	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	80.5	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4263003)							
EM2205462-002	SX_OB_20220325_08_27_SS_Duplicate_ALS	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	92.9	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	109	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	113	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	74.1	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 4263006)							
EM2205462-005	SX_OB_20220325_08_25_SS_Primary_ALS_DI	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	90.8	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	104	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	# 62.6	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EM2205462	Page	: 1 of 10
Client	: AGON ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: Craig Trimbur	Telephone	: +6138549 9600
Project	: JC0927	Date Samples Received	: 26-Mar-2022
Site	: 20220326052546-ALS-14	Issue Date	: 04-Apr-2022
Sampler	: Emma S - EP	No. of samples received	: 6
Order number	: ----	No. of samples analysed	: 6

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

- Analysis Holding Time Outliers exist - please see following pages for full details.

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							
EP231A: Perfluoroalkyl Sulfonic Acids	EM2205201--005	Anonymous	Perfluorohexane sulfonic acid (PFHxS)	355-46-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	EM2205201--005	Anonymous	Perfluorohexanoic acid (PFHxA)	307-24-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	EM2205462--005	SX_OB_20220325_08_25_SS	Perfluorotetradecanoic acid (PFTeDA)	376-06-7	70.8 %	71.0-132%	Recovery less than lower data quality objective
EP231C: Perfluoroalkyl Sulfonamides	EM2205462--005	SX_OB_20220325_08_25_SS	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	52.3 %	70.0-130%	Recovery less than lower data quality objective
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2205462--005	SX_OB_20220325_08_25_SS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	62.6 %	70.0-130%	Recovery less than lower data quality objective

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method	Extraction / Preparation			Analysis			
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue	
EA001: pH in soil using 0.01M CaCl extract							
Soil Glass Jar - Unpreserved							
SX_OB_20220325_08_25_SS_Primary_ALS,	SX_OB_20220325_08_27_SS_Duplicate_ALS	----	----	----	01-Apr-2022	31-Mar-2022	1

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA001: pH in soil using 0.01M CaCl extract							
Soil Glass Jar - Unpreserved (EA001)							
SX_OB_20220325_08_25_SS_Primary_ALS,	SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	31-Mar-2022	01-Apr-2022	01-Apr-2022	31-Mar-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
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	----	----	----	31-Mar-2022	08-Apr-2022	
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	21-Sep-2022		01-Apr-2022	21-Sep-2022	
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	22-Apr-2022		01-Apr-2022	22-Apr-2022	
EG048: Hexavalent Chromium (Alkaline Digest)							
Soil Glass Jar - Unpreserved (EG048G)							
SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	22-Apr-2022		01-Apr-2022	08-Apr-2022	
EK026SF: Total CN by Segmented Flow Analyser							
Soil Glass Jar - Unpreserved (EK026SF)							
SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	08-Apr-2022		02-Apr-2022	15-Apr-2022	
EK040T: Fluoride Total							
Soil Glass Jar - Unpreserved (EK040T)							
SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	22-Apr-2022		04-Apr-2022	22-Apr-2022	
EN60: ASLP Leaching Procedure - Inorganics/PFAS (Plastic Vessel)							
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a-P)							
SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	31-Mar-2022	21-Sep-2022		----	----	----
EN60-DI: Bottle Leaching Procedure - Inorganics/PFAS (Plastic Vessel)							
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60-DIa-P)							
SX_OB_20220325_08_25_SS_Primary_ALS - DI, SX_OB_20220325_08_27_SS_Duplicate_ALS - DI	25-Mar-2022	31-Mar-2022	21-Sep-2022		----	----	----
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066-EM)							
SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	08-Apr-2022		01-Apr-2022	11-May-2022	
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074-UT)							
SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	31-Mar-2022	01-Apr-2022		01-Apr-2022	01-Apr-2022	
EP074H: Naphthalene							
Soil Glass Jar - Unpreserved (EP074-UT)							
SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	31-Mar-2022	01-Apr-2022		01-Apr-2022	01-Apr-2022	
EP074I: Volatile Halogenated Compounds							
Soil Glass Jar - Unpreserved (EP074-UT)							
SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	31-Mar-2022	01-Apr-2022		01-Apr-2022	01-Apr-2022	
EP075A: Phenolic Compounds (Halogenated)							
Soil Glass Jar - Unpreserved (EP075-EM)							
SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	08-Apr-2022		01-Apr-2022	11-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 (Non-halogenated)							
Soil Glass Jar - Unpreserved (EP075-EM)							
SX_OB_20220325_08_25_SS_Primary_ALS,	SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	08-Apr-2022		01-Apr-2022	11-May-2022
EP075B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075-EM)							
SX_OB_20220325_08_25_SS_Primary_ALS,	SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	08-Apr-2022		01-Apr-2022	11-May-2022
EP075I: Organochlorine Pesticides							
Soil Glass Jar - Unpreserved (EP075-EM)							
SX_OB_20220325_08_25_SS_Primary_ALS,	SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	08-Apr-2022		01-Apr-2022	11-May-2022
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071-EM)							
SX_OB_20220325_08_25_SS_Primary_ALS,	SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	08-Apr-2022		01-Apr-2022	11-May-2022
Soil Glass Jar - Unpreserved (EP074-UT)							
SX_OB_20220325_08_25_SS_Primary_ALS,	SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	31-Mar-2022	01-Apr-2022		01-Apr-2022	01-Apr-2022
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP071-EM)							
SX_OB_20220325_08_25_SS_Primary_ALS,	SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	08-Apr-2022		01-Apr-2022	11-May-2022
Soil Glass Jar - Unpreserved (EP074-UT)							
SX_OB_20220325_08_25_SS_Primary_ALS,	SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	31-Mar-2022	01-Apr-2022		01-Apr-2022	01-Apr-2022
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X)							
SX_OB_20220325_08_25_SS_Primary_ALS,	SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	21-Sep-2022		01-Apr-2022	11-May-2022
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X)							
SX_OB_20220325_08_25_SS_Primary_ALS,	SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	21-Sep-2022		01-Apr-2022	11-May-2022
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X)							
SX_OB_20220325_08_25_SS_Primary_ALS,	SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	21-Sep-2022		01-Apr-2022	11-May-2022
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X)							
SX_OB_20220325_08_25_SS_Primary_ALS,	SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	21-Sep-2022		01-Apr-2022	11-May-2022
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X)							
SX_OB_20220325_08_25_SS_Primary_ALS,	SX_OB_20220325_08_27_SS_Duplicate_ALS	25-Mar-2022	01-Apr-2022	21-Sep-2022		01-Apr-2022	11-May-2022

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

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



Matrix: WATER

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) SX_OB_20220325_08_45_SR_Primary_ALS, SX_OB_20220325_08_46_SB_Primary_ALS	25-Mar-2022	31-Mar-2022	21-Sep-2022		31-Mar-2022	21-Sep-2022	
HDPE (no PTFE) (EP231X) SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS, SX_OB_20220325_08_25_SS_Primary_ALS - DI, SX_OB_20220325_08_27_SS_Duplicate_ALS - DI	31-Mar-2022	01-Apr-2022	27-Sep-2022		01-Apr-2022	27-Sep-2022	
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) SX_OB_20220325_08_45_SR_Primary_ALS, SX_OB_20220325_08_46_SB_Primary_ALS	25-Mar-2022	31-Mar-2022	21-Sep-2022		31-Mar-2022	21-Sep-2022	
HDPE (no PTFE) (EP231X) SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS, SX_OB_20220325_08_25_SS_Primary_ALS - DI, SX_OB_20220325_08_27_SS_Duplicate_ALS - DI	31-Mar-2022	01-Apr-2022	27-Sep-2022		01-Apr-2022	27-Sep-2022	
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) SX_OB_20220325_08_45_SR_Primary_ALS, SX_OB_20220325_08_46_SB_Primary_ALS	25-Mar-2022	31-Mar-2022	21-Sep-2022		31-Mar-2022	21-Sep-2022	
HDPE (no PTFE) (EP231X) SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS, SX_OB_20220325_08_25_SS_Primary_ALS - DI, SX_OB_20220325_08_27_SS_Duplicate_ALS - DI	31-Mar-2022	01-Apr-2022	27-Sep-2022		01-Apr-2022	27-Sep-2022	
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) SX_OB_20220325_08_45_SR_Primary_ALS, SX_OB_20220325_08_46_SB_Primary_ALS	25-Mar-2022	31-Mar-2022	21-Sep-2022		31-Mar-2022	21-Sep-2022	
HDPE (no PTFE) (EP231X) SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS, SX_OB_20220325_08_25_SS_Primary_ALS - DI, SX_OB_20220325_08_27_SS_Duplicate_ALS - DI	31-Mar-2022	01-Apr-2022	27-Sep-2022		01-Apr-2022	27-Sep-2022	
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) SX_OB_20220325_08_45_SR_Primary_ALS, SX_OB_20220325_08_46_SB_Primary_ALS	25-Mar-2022	31-Mar-2022	21-Sep-2022		31-Mar-2022	21-Sep-2022	
HDPE (no PTFE) (EP231X) SX_OB_20220325_08_25_SS_Primary_ALS, SX_OB_20220325_08_27_SS_Duplicate_ALS, SX_OB_20220325_08_25_SS_Primary_ALS - DI, SX_OB_20220325_08_27_SS_Duplicate_ALS - DI	31-Mar-2022	01-Apr-2022	27-Sep-2022		01-Apr-2022	27-Sep-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	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	13	15.38	10.00		NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	2	13	15.38	10.00		NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	13	15.38	10.00		NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	13	15.38	10.00		NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	13	15.38	10.00		NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	2	13	15.38	10.00		NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	13	15.38	10.00		NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	13	15.38	10.00		NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	13	15.38	10.00		NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	13	15.38	10.00		NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	2	13	15.38	10.00		NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	2	50.00	10.00		NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	13	15.38	10.00		NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	13	15.38	10.00		NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	2	50.00	5.00		NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Deionised Water Leach - Plastic Leaching Vessel	EN60-Dia-P	1	12	8.33	5.00		NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	2	50.00	5.00		NEPM 2013 B3 & ALS QC Standard



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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Matrix Spikes (MS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	13	15.38	10.00		NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	13	7.69	5.00		NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	2	50.00	5.00		NEPM 2013 B3 & ALS QC Standard

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

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	6	53	11.32	10.00		NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	53	5.66	5.00		NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	53	5.66	5.00		NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	53	5.66	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.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.

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



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