

December 5, 2018

Mr. Michael Shaffer
Magna Construction Services
13023 NE Highway 99
Suite 7-138
Vancouver, Washington 98686-2767

RE: Summary of Selected Confirmational Soil Sampling
Vancouver Iron and Steel, Inc. Property
1200 West 13th Street
Vancouver, Washington 98660-2716
AEG Project Number 18-222

Dear Mr. Shaffer:

On behalf of the property owner of the above-referenced Site, Associated Environmental Group, LLC (AEG) is submitting this letter to summarize the results of the confirmation soil samples collected from the Site on October 29, 2018 and November 14, 2018. The sample locations were selected by Magna Construction Services, Inc. (Magna), and were based on soil sampling investigations completed by Environmental Partners, Inc. (EPI) throughout 2017 and 2018. AEG collected soil samples from the areas designated AOPC1 (metal receiving), APOC5 (southwest compressor), APOC7 (south compressor), and APOC14 (north compressor). The locations of these areas are illustrated on Figure 1, *Confirmation Soil Sample Locations*.

Magna was contracted to remove soil from specific locations around the Site that were identified by EPI as containing recognized environmental conditions (RECs). Magna was provided the locations and approximate volume of soil to be removed (excavated) from each of the REC areas. Magna contracted AEG to sample the soil at the exposed layer after the designated volume of soil was removed during demolition activities. The laboratory methods for the soil samples were based on the sample matrix used by EPI during Site characterization, and is outlined in Table 1, *Summary of Laboratory Analyses*.

The individual excavation areas were split into quadrants, and soil samples were collected at the exposed soil surface prior to backfill placement (see Appendix A, *Site Photographs*). Soil samples were collected and placed into laboratory-provided 40-milliliter glass vials and 4-ounce glass jars for the analyses of gasoline components. The soil samples were transported to the Pace Analytical Laboratory in Mt. Juliet, Tennessee, for analyses following industry standard chain-of-custody procedures. The requested sample analysis for each area, as presented on Table 1, *Summary of Laboratory Analyses*, was to confirm that the contaminants of concern (COCs) were below the applicable Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) cleanup standards.

Two composite soil samples were collected from the stockpiled material that was excavated from the REC areas at the Site and stored on the northwest property. The stockpiled soil was tested as required by WASCO County Landfill (WCL) located in The Dalles, Oregon to show that the material was impacted with COCs but classified as “non-hazardous” for landfill disposal.

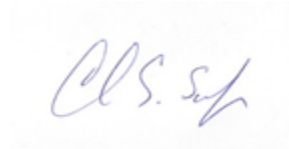
The analytical results indicated no COCs were present at concentrations above their respective MTCA cleanup levels. Analytical results of the stockpile soils identified levels of chromium that required additional analysis for speciation of trivalent (chromium III) and hexavalent chromium (chromium IV) for hazard classification. The follow-up results indicated the material was suitable for landfill disposal. Attached are the laboratory data sheets and summary tables for samples collected from all areas and the stockpiled material.

Once the confirmation sampling indicated the selected areas were below the applicable MTCA cleanup standards for the COCs, Magna backfilled the excavations with suitable material. AEG provided the sample results to WCL and completed a material profile request for a disposal permit (on behalf of Magna) to have the stockpiled soils removed from the Site. Magna coordinated the trucking and disposal activities using *Approval Number 2042-18-204*.

If you have any questions or concerns regarding this report, please feel free to contact our office at (360) 352-9835.

Sincerely,

Associated Environmental Group, LLC



Charles S. Swift, R.S.A
Senior Project Manager

Enclosures: *Figure 1 – Confirmation Soil Sample Locations*

Table 1 – Summary of Laboratory Analyses (EPI)

Table 2 – Summary of Soil Analytical Results (VOCs)

Table 3 – Summary of Soil Analytical Results (SVOCs)

Table 4 – Summary of Soil Analytical Results (Metals)

Appendix A – Site Photographs

Appendix B – Laboratory Results & WASCO County Landfill Disposal Profile # 2042-18-204

FIGURES



FIGURE 1

CONFIRMATION SOIL SAMPLE LOCATIONS

 Associated Environmental Group, LLC				
Project: 18-222	SIZE	FSCM NO	DWG NO	REV
Vancouver Iron Works	SCALE	1 : 1	SHEET	2 OF 4

TABLES

Table 1
Summary of Laboratory Analyses
Subsurface Investigation Letter Report
Swartz Steel Facility
1200 West 13th Street, Vancouver, Washington

Area of Potential Concern (AOPC)	8 RCRA Metals	DRO/ORO	GRO	VOCs	sVOCs	PCBs	NORMAL
AOPC 1 – Metal Receiving Area	X	X	X	X	X	X	
AOPC 2 – EAF Area	X						
AOPC 3 – Foundry Building–Sands	X	X					
AOPC 4 – Stormwater Drain–Main Yard	X	X	X	X	X	X	
AOPC 5 – Southwest Compressor		X			X	X	
AOPC 6 – Southwest Drywell	X	X	X	X	X	X	
AOPC 7 – South Compressor		X				X	
AOPC 8 – Maintenance Shop Building	X	X	X	X	X	X	
AOPC 9 – Welding Station Building	X	X	X	X	X		
AOPC 10 – Stormwater Retention Structure	X	X	X	X	X	X	
AOPC 11 – Oil-Sand Storage and Bag House	X	X				X	
AOPC 12 – Northwest Petroleum Storage	X	X	X	X	X	X	
AOPC 13 – Foundry Waste Material	X	X	X	X	X	X	X
AOPC 14 – North Compressor		X				X	
AOPC 15 – Clark County Transformer Compound		X	X	X		X	

Notes:

8 RCRA Metals	Resource Conservation and Recovery Act (RCRA) metals including Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver
DRO/ORO	Diesel- and oil-range organics by Northwest Total Petroleum hydrocarbon (NWTPH-Dx)
GRO	Gasoline Range Organics by NWTPH-Gx
VOCs	Volatile Organic Compounds by EPA Method 8260
sVOCs	Semivolatile organic compounds by EPA 8270
PCBs	Polychlorinated biphenyls
NORMAL	Naturally Occurring Radioactive Materials

Table 2 - Summary of Soil Analytical Results (VOCs)
Vancouver Iron Works (18-222)
Vancouver, Washington

Sample Number	Date Collected	GRO (C6-C12)	DRO	RRO	Detected Volatile Organic Compounds								
					Acetone	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Tetrachloro-ethylene	1,2,4-Trimethyl benzene	Methylene Chloride	Naphthalene
AOPC5-1	10/29/2018	--	29	221	<0.0137	<0.0004	<0.00125	<0.00053	<0.00478	0.0241	0.00509	<0.00664	<0.00312
AOPC5-2	10/29/2018	--	8.08	46.3	<0.0137	<0.0004	<0.00125	<0.00053	<0.00478	0.00993	0.00327	<0.00664	0.00466
AOPC5-3	10/29/2018	--	22.7	42.9	0.0566	0.00918	0.00309	<0.00053	<0.00478	0.091	0.00346	<0.00664	0.0213
AOPC5-4	10/29/2018	--	1,660	5,460	<0.0137	<0.0004	<0.00125	<0.00053	<0.00478	0.029	<0.00116	<0.00664	<0.00312
AOPC7-1	10/29/2018	--	97.6	338	--	--	--	--	--	--	--	--	--
AOPC7-2	10/29/2018	--	69.5	522	--	--	--	--	--	--	--	--	--
AOPC1-1	10/29/2018	1.27	11.6	63.7	<0.0137	<0.00496	0.00143	<0.00053	<0.00478	<0.0007	0.00282	<0.00664	0.0153
AOPC1-2	10/29/2018	1.03	21.0	82.4	<0.0137	0.0124	0.0111	0.0028	0.0362	<0.0007	0.00409	<0.00664	0.00858
AOPC14-1	10/29/2018	--	21.2	155	--	--	--	--	--	--	--	--	--
STOCKPILE-1	10/29/2018	0.973	213	1,130	0.0218	0.00333	0.0117	0.00353	0.0342	0.0753	0.00421	<0.00664	0.00673
STOCKPILE-2	10/29/2018	1.55	119	620	0.024	0.00215	0.00519	<0.00053	<0.00478	0.00914	0.00352	<0.00664	0.0137
APOC1-3	11/14/2018	<0.0339	<1.33	<3.33	<0.0137	<0.0004	<0.00125	<0.00053	<0.00478	<0.0007	<0.00116	<0.00664	<0.00312
APOC1-4	11/14/2018	<0.0339	6.08	6.08	<0.0137	<0.0004	<0.00125	<0.00053	<0.00478	<0.0007	<0.00116	0.0173	0.0193
APOC1-5	11/14/2018	<0.0339	26.2	26.2	<0.0137	0.0005	<0.00125	<0.00053	<0.00478	<0.0007	<0.00116	0.0170	0.029
PQL		0.0339	1.33	3.33	0.0137	0.0004	0.00125	0.00053	0.00478	0.0007	0.00116	0.00664	0.00312
MTCA Method A Cleanup Levels		30*	2,000	2,000	72,000**	0.03	7	6	16,000**	0.05	800**	71.42**	5

Notes:

All values are presented in milligrams per kilogram (mg/kg)

-- = Not analyzed for constituent

< = Not detected at the listed laboratory detection limits

PQL = Practical Quantification Limit (laboratory detection limit)

Red Bold indicates the detected concentration exceeds Ecology MTCA Method A cleanup levels

Bold indicates the detected concentration is below Ecology MTCA Method A cleanup levels

*TPH-Gasoline Cleanup Level with no presence of Benzene anywhere at the Site

**MTCA Method B Cleanup Level; no Method A cleanup level has been established for this constituent.

Table 3 - Summary of Soil Analytical Results (SVOCs)
Vancouver Iron Works (18-222)
Vancouver, Washington

Sample Number	Date Collected	Detected Semi-Volatile Organic Compounds						Detectable PCBs
		Benzo(b)fluoranthene	Bis(2-Ethylhexyl) phthalate	Fluoranthene	2-Methyl naphththalene	Phenanthrene	Phenol	Aroclor 1260
AOPC5-1	10/29/2018	--	--	--	--	--	--	0.150
AOPC5-2	10/29/2018	--	--	--	--	--	--	0.154
AOPC5-3	10/29/2018	--	--	--	--	--	--	0.170
AOPC5-4	10/29/2018	--	--	--	--	--	--	0.095
AOPC7-1	10/29/2018	--	--	--	--	--	--	<0.00494
AOPC7-2	10/29/2018	--	--	--	--	--	--	<0.00494
AOPC1-1	10/29/2018	<0.00695	0.0174	<0.00496	<0.00861	<0.00528	<0.00695	<0.00494
AOPC1-2	10/29/2018	0.0188	<0.0240	0.0156	<0.00861	<0.00528	<0.00695	<0.00494
AOPC14-1	10/29/2018	--	--	--	--	--	--	0.0135
STOCKPILE-1	10/29/2018	<0.00695	<0.012	<0.00496	<0.00861	<0.00528	<0.00695	0.633
STOCKPILE-2	10/29/2018	<0.00695	0.859	--	<0.00861	<0.00528	0.549	0.0276
APOC1-3	11/14/2018	<0.00695	<0.012	<0.00496	<0.00861	<0.00528	<0.00695	<0.00494
APOC1-4	11/14/2018	0.0305	<0.012	0.0113	0.0109	0.0081	0.0377	<0.00494
APOC1-5	11/14/2018	0.0432	0.050	0.0233	0.0254	0.0268	0.0623	<0.00494
PQL		0.00695	0.012	0.00496	0.00861	0.00528	0.00695	0.00494
MTCA Method A Cleanup Levels		1.37*	1,600*	3,200*	320*	NS	24,000*	1

Notes:

All values are presented in milligrams per kilogram (mg/kg)

PCBs = Polychlorinated biphenyls

-- = Not analyzed for constituent

< = Not detected at the listed laboratory detection limits

PQL = Practical Quantification Limit (laboratory detection limit)

Red Bold indicates the detected concentration exceeds Ecology MTCA Method A cleanup levels

Bold indicates the detected concentration is below Ecology MTCA Method A cleanup levels

NS = No MTCA Cleanup Standard established for constituent.

*MTCA Method B Cleanup Level; no Method A cleanup level has been established for this constituent.

Table 4 - Summary of Soil Analytical Results - Metals

Vancouver Iron Works (18-222)

Vancouver, Washington

Sample Number	Date Collected	RCRA 8 Metals									
		Arsenic	Barium	Cadmium	Total Chromium	Chromium (III)	Chromium (VI)	Lead	Selenium	Silver	Mercury
AOPC1-1	10/29/2018	0.641	231	<0.0700	13.5	--	--	5.69	<0.620	<0.120	0.0119
AOPC1-2	10/29/2018	1.39	172	<0.0700	56.4	37.2	19.2	15	<0.620	<0.120	0.0172
AOPC14-1	10/29/2018	--	--	--	--	--	--	--	--	--	--
STOCKPILE-1	10/29/2018	0.641	137	0.596	41.1	40.2	0.954	128	<0.620	<0.120	0.0505
STOCKPILE-2	10/29/2018	0.938	49.4	<0.0700	185	185	<0.64	21.4	<0.620	<0.120	0.00724
APOC1-3	11/14/2018	3.4	227	<0.633	17.2	--	--	5.12	<0.785	<0.120	0.00697
APOC1-4	11/14/2018	2.1	179	0.087	20.2	--	--	8.14	<0.785	<0.120	0.0109
APOC1-5	11/14/2018	4.21	179	0.447	60.4	--	--	128	<0.620	<0.120	0.0114
PQL		0.460	0.170	0.0700	0.140	0.140	0.640	0.190	0.620	0.120	0.0028
MTCA Method A Cleanup Levels		20	16,000*	2	2,000	2,000	19	250	400*	400*	2

Notes:

All values are presented in milligrams per kilogram (mg/kg)

-- = Not analyzed for constituent

< = Not detected at the listed laboratory detection limits

PQL = Practical Quantification Limit (laboratory detection limit)

Red Bold indicates the detected concentration exceeds Ecology MTCA Method A cleanup levels**Bold** indicates the detected concentration is below Ecology MTCA Method A cleanup levels

*MTCA Method B Cleanup Level; no Method A cleanup level has been established for this constituent.

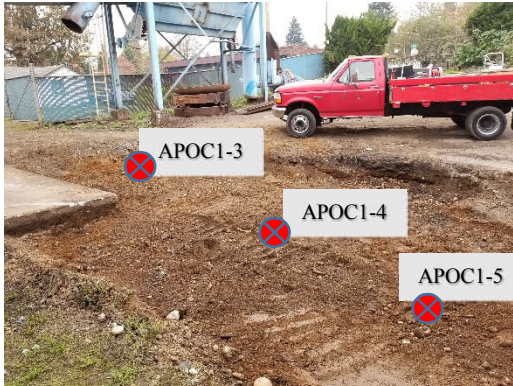
APPENDIX A

Site Photographs

SITE PHOTOGRAPHIC RECORD

Project No.: 18-222

Project Name: Vancouver Iron Works Property

	
Photo #1: Location APOC 1 – Metal receiving location facing northeast.	Photo #2: Location APOC 1 – Metal receiving location facing northwest.
	
Photo #2: Location APOC 5 – Southwest compressor location facing west.	Photo #4: Location APOC 7 – South compressor location facing south.
	
Photo #5: Location APOC 14 – North compressor location facing southwest.	Photo #6: Stockpiled soil located on the northwest property facing northwest.

APPENDIX B

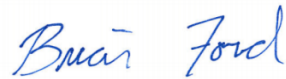
Laboratory Results Disposal Profile 2042-18-204

Associated Environmental - Olympia, WA

Sample Delivery Group: L1039720
Samples Received: 10/31/2018
Project Number: #18-222
Description: Vancouver Iron

Report To: Charles Swift
605 11th Ave SE
Suite 201
Olympia, WA 98501

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



AOPC5-1 L1039720-01 Solid

Collected by
Charles Swift

Collected date/time
10/29/18 10:30

Received date/time
10/31/18 08:45

¹ Cp

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1190827	1	11/05/18 13:43	11/05/18 13:57	KDW
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1190959	2	10/29/18 10:30	11/03/18 22:23	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1192418	2	10/29/18 10:30	11/07/18 02:50	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1192776	2	10/29/18 10:30	11/07/18 14:45	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1192533	5	11/05/18 15:05	11/06/18 20:54	KME
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1190707	1	11/03/18 21:09	11/04/18 07:46	RP

² Tc

³ Ss

⁴ Cn

⁵ Sr

AOPC5-2 L1039720-02 Solid

Collected by
Charles Swift

Collected date/time
10/29/18 10:35

Received date/time
10/31/18 08:45

⁶ Qc

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1190827	1	11/05/18 13:43	11/05/18 13:57	KDW
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1190959	1	10/29/18 10:35	11/03/18 22:41	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1192418	1	10/29/18 10:35	11/07/18 03:11	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1192776	1	10/29/18 10:35	11/07/18 15:04	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1191272	1	11/05/18 15:05	11/07/18 15:23	TJD
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1190707	1	11/03/18 21:09	11/04/18 08:00	RP

⁷ Gl

⁸ Al

⁹ Sc

AOPC5-3 L1039720-03 Solid

Collected by
Charles Swift

Collected date/time
10/29/18 10:40

Received date/time
10/31/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1190827	1	11/05/18 13:43	11/05/18 13:57	KDW
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1190959	2	10/29/18 10:40	11/03/18 23:00	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1192418	2	10/29/18 10:40	11/07/18 03:31	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1192776	2	10/29/18 10:40	11/07/18 15:23	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1191272	1	11/05/18 15:05	11/07/18 15:39	TJD
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1190707	1	11/03/18 21:09	11/04/18 08:14	RP

AOPC5-4 L1039720-04 Solid

Collected by
Charles Swift

Collected date/time
10/29/18 10:45

Received date/time
10/31/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1190827	1	11/05/18 13:43	11/05/18 13:57	KDW
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1190959	1	10/29/18 10:45	11/04/18 10:14	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1192418	1	10/29/18 10:45	11/07/18 03:51	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1192533	10	11/05/18 15:05	11/06/18 21:19	KME
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1192533	50	11/05/18 15:05	11/06/18 23:53	KME
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1190707	1	11/03/18 21:09	11/04/18 08:28	RP

AOPC7-1 L1039720-05 Solid

Collected by
Charles Swift

Collected date/time
10/29/18 11:00

Received date/time
10/31/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1190828	1	11/05/18 14:00	11/05/18 14:13	KDW
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1192533	5	11/05/18 15:05	11/06/18 20:39	KME
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1190707	1	11/03/18 21:09	11/04/18 08:42	RP

ACCOUNT:

Associated Environmental - Olympia, WA

PROJECT:

#18-222

SDG:

L1039720

DATE/TIME:

11/09/18 10:45

PAGE:

3 of 65

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



AOPC7-2 L1039720-06 Solid

			Collected by	Collected date/time	Received date/time
			Charles Swift	10/29/18 11:10	10/31/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1190828	1	11/05/18 14:00	11/05/18 14:13	KDW
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1192533	10	11/05/18 15:05	11/06/18 21:06	KME
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1190707	1	11/03/18 21:09	11/04/18 08:56	RP

¹ Cp

² Tc

³ Ss

AOPC1-1 L1039720-07 Solid

			Collected by	Collected date/time	Received date/time
			Charles Swift	10/29/18 11:20	10/31/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1190828	1	11/05/18 14:00	11/05/18 14:13	KDW
Mercury by Method 7471B	WG1189729	1	11/01/18 10:34	11/01/18 16:41	TCT
Metals (ICP) by Method 6010D	WG1189927	1	11/01/18 15:51	11/04/18 13:16	ST
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1191444	25	10/29/18 11:20	11/05/18 14:36	JAH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1190959	1	10/29/18 11:20	11/04/18 10:33	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1192418	1	10/29/18 11:20	11/07/18 04:10	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1191272	1	11/05/18 15:05	11/07/18 15:55	TJD
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1190707	1	11/03/18 21:09	11/04/18 09:10	RP
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1191265	1	11/05/18 09:59	11/06/18 02:55	SNR

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

AOPC1-2 L1039720-08 Solid

			Collected by	Collected date/time	Received date/time
			Charles Swift	10/29/18 11:25	10/31/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1189927	1	11/01/18 15:51	11/08/18 13:37	MCG
Total Solids by Method 2540 G-2011	WG1190828	1	11/05/18 14:00	11/05/18 14:13	KDW
Wet Chemistry by Method 3060A/7196A	WG1193182	1	11/08/18 08:01	11/08/18 13:37	MCG
Mercury by Method 7471B	WG1189729	1	11/01/18 10:34	11/01/18 16:44	TCT
Metals (ICP) by Method 6010D	WG1189927	1	11/01/18 15:51	11/04/18 13:32	ST
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1191444	25	10/29/18 11:25	11/05/18 14:58	JAH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1190959	1	10/29/18 11:25	11/04/18 10:52	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1192418	1	10/29/18 11:25	11/07/18 04:30	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1192533	2	11/05/18 15:05	11/06/18 23:11	KME
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1190707	1	11/03/18 21:09	11/04/18 09:24	RP
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1191265	2	11/05/18 09:59	11/06/18 04:04	SNR

AOPC14-1 L1039720-09 Solid

			Collected by	Collected date/time	Received date/time
			Charles Swift	10/29/18 12:00	10/31/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1190828	1	11/05/18 14:00	11/05/18 14:13	KDW
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1192533	10	11/05/18 15:05	11/06/18 21:32	KME
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1190707	1	11/03/18 21:09	11/04/18 09:38	RP

STOCKPILE-1 L1039720-10 Solid

			Collected by	Collected date/time	Received date/time
			Charles Swift	10/29/18 00:00	10/31/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1189927	1	11/01/18 15:51	11/08/18 13:39	MCG
Total Solids by Method 2540 G-2011	WG1190828	1	11/05/18 14:00	11/05/18 14:13	KDW
Wet Chemistry by Method 3060A/7196A	WG1193182	1	11/08/18 08:01	11/08/18 13:39	MCG
Mercury by Method 7471B	WG1189729	1	11/01/18 10:34	11/01/18 16:47	TCT
Metals (ICP) by Method 6010D	WG1189927	1	11/01/18 15:51	11/04/18 13:40	ST
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1191444	25	10/29/18 00:00	11/05/18 15:21	JAH

ACCOUNT:

Associated Environmental - Olympia, WA

PROJECT:

#18-222

SDG:

L1039720

DATE/TIME:

11/09/18 10:45

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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



STOCKPILE-1 L1039720-10 Solid

Collected by
Charles Swift

Collected date/time
10/29/18 00:00

Received date/time
10/31/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1190959	1	10/29/18 00:00	11/04/18 11:10	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1192418	1	10/29/18 00:00	11/07/18 04:50	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1192533	10	11/05/18 15:05	11/06/18 21:44	KME
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1191392	1	11/05/18 07:17	11/06/18 11:39	TD
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1191567	10	11/06/18 06:31	11/06/18 16:52	JNJ

¹ Cp

² Tc

³ Ss

⁴ Cn

STOCKPILE-2 L1039720-11 Solid

Collected by
Charles Swift

Collected date/time
10/29/18 12:15

Received date/time
10/31/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1189927	1	11/01/18 15:51	11/08/18 13:39	MCG
Total Solids by Method 2540 G-2011	WG1190828	1	11/05/18 14:00	11/05/18 14:13	KDW
Wet Chemistry by Method 3060A/7196A	WG1193182	1	11/08/18 08:01	11/08/18 13:39	MCG
Mercury by Method 7471B	WG1189729	1	11/01/18 10:34	11/01/18 16:49	TCT
Metals (ICP) by Method 6010D	WG1189927	1	11/01/18 15:51	11/04/18 13:43	ST
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1191444	25	10/29/18 12:15	11/05/18 15:43	JAH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1190959	1	10/29/18 12:15	11/04/18 11:29	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1192418	1	10/29/18 12:15	11/07/18 08:23	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1192533	10	11/05/18 15:05	11/06/18 20:13	KME
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1191392	1	11/05/18 07:17	11/06/18 11:53	TD
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1191567	10	11/06/18 06:31	11/06/18 17:15	JNJ

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCOUNT:

Associated Environmental - Olympia, WA

PROJECT:

#18-222

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L1039720

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11/09/18 10:45

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All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.4		1	11/05/2018 13:57	WG1190827

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0303	0.0553	2	11/07/2018 02:50	WG1192418
Acrylonitrile	U		0.00420	0.0276	2	11/03/2018 22:23	WG1190959
Benzene	U		0.000885	0.00221	2	11/03/2018 22:23	WG1190959
Bromobenzene	U		0.00232	0.0276	2	11/03/2018 22:23	WG1190959
Bromodichloromethane	U		0.00175	0.00553	2	11/07/2018 02:50	WG1192418
Bromoform	U		0.0133	0.0553	2	11/03/2018 22:23	WG1190959
Bromomethane	U	J3	0.00818	0.0276	2	11/03/2018 22:23	WG1190959
n-Butylbenzene	U		0.00849	0.0276	2	11/03/2018 22:23	WG1190959
sec-Butylbenzene	U		0.00559	0.0276	2	11/03/2018 22:23	WG1190959
tert-Butylbenzene	U		0.00343	0.0111	2	11/03/2018 22:23	WG1190959
Carbon tetrachloride	U		0.00239	0.0111	2	11/03/2018 22:23	WG1190959
Chlorobenzene	U		0.00127	0.00553	2	11/03/2018 22:23	WG1190959
Chlorodibromomethane	U		0.000995	0.00553	2	11/03/2018 22:23	WG1190959
Chloroethane	U		0.00239	0.0111	2	11/03/2018 22:23	WG1190959
Chloroform	U		0.000918	0.00553	2	11/03/2018 22:23	WG1190959
Chloromethane	U		0.00307	0.0276	2	11/03/2018 22:23	WG1190959
2-Chlorotoluene	U		0.00203	0.00553	2	11/03/2018 22:23	WG1190959
4-Chlorotoluene	U		0.00250	0.0111	2	11/03/2018 22:23	WG1190959
1,2-Dibromo-3-Chloropropane	U		0.0113	0.0553	2	11/03/2018 22:23	WG1190959
1,2-Dibromoethane	U		0.00116	0.00553	2	11/03/2018 22:23	WG1190959
Dibromomethane	U		0.00221	0.0111	2	11/03/2018 22:23	WG1190959
1,2-Dichlorobenzene	U		0.00321	0.0111	2	11/03/2018 22:23	WG1190959
1,3-Dichlorobenzene	U		0.00376	0.0111	2	11/07/2018 02:50	WG1192418
1,4-Dichlorobenzene	U		0.00436	0.0111	2	11/03/2018 22:23	WG1190959
Dichlorodifluoromethane	U		0.00181	0.00553	2	11/03/2018 22:23	WG1190959
1,1-Dichloroethane	U		0.00127	0.00553	2	11/03/2018 22:23	WG1190959
1,2-Dichloroethane	U		0.00105	0.00553	2	11/03/2018 22:23	WG1190959
1,1-Dichloroethene	U		0.00111	0.00553	2	11/03/2018 22:23	WG1190959
cis-1,2-Dichloroethene	U		0.00153	0.00553	2	11/03/2018 22:23	WG1190959
trans-1,2-Dichloroethene	U		0.00316	0.0111	2	11/03/2018 22:23	WG1190959
1,2-Dichloropropane	U		0.00281	0.0111	2	11/07/2018 02:50	WG1192418
1,1-Dichloropropene	U		0.00155	0.00553	2	11/03/2018 22:23	WG1190959
1,3-Dichloropropene	U		0.00387	0.0111	2	11/03/2018 22:23	WG1190959
cis-1,3-Dichloropropene	U		0.00150	0.00553	2	11/03/2018 22:23	WG1190959
trans-1,3-Dichloropropene	U		0.00338	0.0111	2	11/03/2018 22:23	WG1190959
2,2-Dichloropropane	U		0.00176	0.00553	2	11/03/2018 22:23	WG1190959
Di-isopropyl ether	U		0.000774	0.00221	2	11/03/2018 22:23	WG1190959
Ethylbenzene	U		0.00117	0.00553	2	11/03/2018 22:23	WG1190959
Hexachloro-1,3-butadiene	U		0.0281	0.0553	2	11/03/2018 22:23	WG1190959
Isopropylbenzene	U		0.00191	0.00553	2	11/03/2018 22:23	WG1190959
p-Isopropyltoluene	U		0.00515	0.0111	2	11/03/2018 22:23	WG1190959
2-Butanone (MEK)	U	J3	0.0276	0.0553	2	11/03/2018 22:23	WG1190959
Methylene Chloride	U		0.0147	0.0553	2	11/03/2018 22:23	WG1190959
4-Methyl-2-pentanone (MIBK)	U		0.0221	0.0553	2	11/03/2018 22:23	WG1190959
Methyl tert-butyl ether	U		0.000652	0.00221	2	11/03/2018 22:23	WG1190959
Naphthalene	U		0.00690	0.0276	2	11/03/2018 22:23	WG1190959
n-Propylbenzene	U		0.00261	0.0111	2	11/03/2018 22:23	WG1190959
Styrene	U		0.00604	0.0276	2	11/03/2018 22:23	WG1190959
1,1,1,2-Tetrachloroethane	U		0.00111	0.00553	2	11/03/2018 22:23	WG1190959
1,1,2,2-Tetrachloroethane	U		0.000862	0.00553	2	11/03/2018 22:23	WG1190959

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.00149	0.00553	2	11/03/2018 22:23	WG1190959
Tetrachloroethene	0.0241		0.00155	0.00553	2	11/03/2018 22:23	WG1190959
Toluene	U		0.00276	0.0111	2	11/03/2018 22:23	WG1190959
1,2,3-Trichlorobenzene	U		0.00138	0.00553	2	11/07/2018 14:45	WG1192776
1,2,4-Trichlorobenzene	U		0.0107	0.0276	2	11/03/2018 22:23	WG1190959
1,1,1-Trichloroethane	U		0.000608	0.00553	2	11/03/2018 22:23	WG1190959
1,1,2-Trichloroethane	U		0.00196	0.00553	2	11/03/2018 22:23	WG1190959
Trichloroethene	U		0.000885	0.00221	2	11/07/2018 02:50	WG1192418
Trichlorofluoromethane	U		0.00111	0.00553	2	11/03/2018 22:23	WG1190959
1,2,3-Trichloropropane	U		0.0113	0.0276	2	11/03/2018 22:23	WG1190959
1,2,4-Trimethylbenzene	0.00509	J	0.00257	0.0111	2	11/03/2018 22:23	WG1190959
1,2,3-Trimethylbenzene	U		0.00254	0.0111	2	11/03/2018 22:23	WG1190959
Vinyl chloride	U		0.00151	0.00553	2	11/03/2018 22:23	WG1190959
1,3,5-Trimethylbenzene	U		0.00239	0.0111	2	11/03/2018 22:23	WG1190959
Xylenes, Total	U		0.0106	0.0144	2	11/03/2018 22:23	WG1190959
(S) Toluene-d8	112			75.0-131		11/03/2018 22:23	WG1190959
(S) Toluene-d8	106			75.0-131		11/07/2018 02:50	WG1192418
(S) Toluene-d8	112			75.0-131		11/07/2018 14:45	WG1192776
(S) Dibromofluoromethane	100			65.0-129		11/03/2018 22:23	WG1190959
(S) Dibromofluoromethane	90.3			65.0-129		11/07/2018 02:50	WG1192418
(S) Dibromofluoromethane	102			65.0-129		11/07/2018 14:45	WG1192776
(S) 4-Bromofluorobenzene	115			67.0-138		11/03/2018 22:23	WG1190959
(S) 4-Bromofluorobenzene	98.7			67.0-138		11/07/2018 02:50	WG1192418
(S) 4-Bromofluorobenzene	110			67.0-138		11/07/2018 14:45	WG1192776

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Sample Narrative:

L1039720-01 WG1190959: Lowest possible dilution due to low sample volume.

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	29.0		7.35	22.1	5	11/06/2018 20:54	WG1192533
Residual Range Organics (RRO)	221		18.4	55.3	5	11/06/2018 20:54	WG1192533
(S) o-Terphenyl	38.6			18.0-148		11/06/2018 20:54	WG1192533

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00387	0.0188	1	11/04/2018 07:46	WG1190707
PCB 1221	U		0.00594	0.0188	1	11/04/2018 07:46	WG1190707
PCB 1232	U		0.00461	0.0188	1	11/04/2018 07:46	WG1190707
PCB 1242	U		0.00352	0.0188	1	11/04/2018 07:46	WG1190707
PCB 1248	U		0.00348	0.0188	1	11/04/2018 07:46	WG1190707
PCB 1254	U		0.00522	0.0188	1	11/04/2018 07:46	WG1190707
PCB 1260	0.150		0.00546	0.0188	1	11/04/2018 07:46	WG1190707
(S) Decachlorobiphenyl	55.3			10.0-135		11/04/2018 07:46	WG1190707
(S) Tetrachloro-m-xylene	63.1			10.0-139		11/04/2018 07:46	WG1190707



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.9		1	11/05/2018 13:57	WG1190827

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0146	0.0266	1	11/07/2018 03:11	WG1192418
Acrylonitrile	U		0.00202	0.0133	1	11/03/2018 22:41	WG1190959
Benzene	U		0.000426	0.00106	1	11/03/2018 22:41	WG1190959
Bromobenzene	U		0.00112	0.0133	1	11/03/2018 22:41	WG1190959
Bromodichloromethane	U		0.000839	0.00266	1	11/07/2018 03:11	WG1192418
Bromoform	U		0.00637	0.0266	1	11/03/2018 22:41	WG1190959
Bromomethane	U	J3	0.00394	0.0133	1	11/03/2018 22:41	WG1190959
n-Butylbenzene	U		0.00409	0.0133	1	11/03/2018 22:41	WG1190959
sec-Butylbenzene	U		0.00269	0.0133	1	11/03/2018 22:41	WG1190959
tert-Butylbenzene	U		0.00165	0.00532	1	11/03/2018 22:41	WG1190959
Carbon tetrachloride	U		0.00115	0.00532	1	11/03/2018 22:41	WG1190959
Chlorobenzene	U		0.000610	0.00266	1	11/03/2018 22:41	WG1190959
Chlorodibromomethane	U		0.000479	0.00266	1	11/03/2018 22:41	WG1190959
Chloroethane	U		0.00115	0.00532	1	11/03/2018 22:41	WG1190959
Chloroform	U		0.000442	0.00266	1	11/03/2018 22:41	WG1190959
Chloromethane	U		0.00148	0.0133	1	11/03/2018 22:41	WG1190959
2-Chlorotoluene	U		0.000979	0.00266	1	11/03/2018 22:41	WG1190959
4-Chlorotoluene	U		0.00120	0.00532	1	11/03/2018 22:41	WG1190959
1,2-Dibromo-3-Chloropropane	U		0.00543	0.0266	1	11/03/2018 22:41	WG1190959
1,2-Dibromoethane	U		0.000559	0.00266	1	11/03/2018 22:41	WG1190959
Dibromomethane	U		0.00106	0.00532	1	11/03/2018 22:41	WG1190959
1,2-Dichlorobenzene	U		0.00154	0.00532	1	11/03/2018 22:41	WG1190959
1,3-Dichlorobenzene	U		0.00181	0.00532	1	11/07/2018 03:11	WG1192418
1,4-Dichlorobenzene	U		0.00210	0.00532	1	11/03/2018 22:41	WG1190959
Dichlorodifluoromethane	U		0.000871	0.00266	1	11/03/2018 22:41	WG1190959
1,1-Dichloroethane	U		0.000612	0.00266	1	11/03/2018 22:41	WG1190959
1,2-Dichloroethane	U		0.000506	0.00266	1	11/03/2018 22:41	WG1190959
1,1-Dichloroethene	U		0.000532	0.00266	1	11/03/2018 22:41	WG1190959
cis-1,2-Dichloroethene	U		0.000735	0.00266	1	11/03/2018 22:41	WG1190959
trans-1,2-Dichloroethene	U		0.00152	0.00532	1	11/03/2018 22:41	WG1190959
1,2-Dichloropropane	U		0.00135	0.00532	1	11/07/2018 03:11	WG1192418
1,1-Dichloropropene	U		0.000745	0.00266	1	11/03/2018 22:41	WG1190959
1,3-Dichloropropane	U		0.00186	0.00532	1	11/03/2018 22:41	WG1190959
cis-1,3-Dichloropropene	U		0.000722	0.00266	1	11/03/2018 22:41	WG1190959
trans-1,3-Dichloropropene	U		0.00163	0.00532	1	11/03/2018 22:41	WG1190959
2,2-Dichloropropane	U		0.000844	0.00266	1	11/03/2018 22:41	WG1190959
Di-isopropyl ether	U		0.000373	0.00106	1	11/03/2018 22:41	WG1190959
Ethylbenzene	U		0.000564	0.00266	1	11/03/2018 22:41	WG1190959
Hexachloro-1,3-butadiene	U		0.0135	0.0266	1	11/03/2018 22:41	WG1190959
Isopropylbenzene	U		0.000919	0.00266	1	11/03/2018 22:41	WG1190959
p-Isopropyltoluene	U		0.00248	0.00532	1	11/03/2018 22:41	WG1190959
2-Butanone (MEK)	U	J3	0.0133	0.0266	1	11/03/2018 22:41	WG1190959
Methylene Chloride	U		0.00707	0.0266	1	11/03/2018 22:41	WG1190959
4-Methyl-2-pentanone (MIBK)	U		0.0106	0.0266	1	11/03/2018 22:41	WG1190959
Methyl tert-butyl ether	U		0.000314	0.00106	1	11/03/2018 22:41	WG1190959
Naphthalene	0.00466	J	0.00332	0.0133	1	11/03/2018 22:41	WG1190959
n-Propylbenzene	U		0.00126	0.00532	1	11/03/2018 22:41	WG1190959
Styrene	U		0.00291	0.0133	1	11/03/2018 22:41	WG1190959
1,1,1,2-Tetrachloroethane	U		0.000532	0.00266	1	11/03/2018 22:41	WG1190959
1,1,2,2-Tetrachloroethane	U		0.000415	0.00266	1	11/03/2018 22:41	WG1190959

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.000719	0.00266	1	11/03/2018 22:41	WG1190959
Tetrachloroethene	0.00993		0.000745	0.00266	1	11/03/2018 22:41	WG1190959
Toluene	U		0.00133	0.00532	1	11/03/2018 22:41	WG1190959
1,2,3-Trichlorobenzene	U		0.000665	0.00266	1	11/07/2018 15:04	WG1192776
1,2,4-Trichlorobenzene	U		0.00513	0.0133	1	11/03/2018 22:41	WG1190959
1,1,1-Trichloroethane	U		0.000293	0.00266	1	11/03/2018 22:41	WG1190959
1,1,2-Trichloroethane	U		0.000940	0.00266	1	11/03/2018 22:41	WG1190959
Trichloroethene	U		0.000426	0.00106	1	11/07/2018 03:11	WG1192418
Trichlorofluoromethane	U		0.000532	0.00266	1	11/03/2018 22:41	WG1190959
1,2,3-Trichloropropane	U		0.00543	0.0133	1	11/03/2018 22:41	WG1190959
1,2,4-Trimethylbenzene	0.00327	J	0.00123	0.00532	1	11/03/2018 22:41	WG1190959
1,2,3-Trimethylbenzene	U		0.00122	0.00532	1	11/03/2018 22:41	WG1190959
Vinyl chloride	U		0.000727	0.00266	1	11/03/2018 22:41	WG1190959
1,3,5-Trimethylbenzene	U		0.00115	0.00532	1	11/03/2018 22:41	WG1190959
Xylenes, Total	U		0.00509	0.00692	1	11/03/2018 22:41	WG1190959
(S) Toluene-d8	115			75.0-131		11/03/2018 22:41	WG1190959
(S) Toluene-d8	106			75.0-131		11/07/2018 03:11	WG1192418
(S) Toluene-d8	119			75.0-131		11/07/2018 15:04	WG1192776
(S) Dibromofluoromethane	94.8			65.0-129		11/03/2018 22:41	WG1190959
(S) Dibromofluoromethane	88.7			65.0-129		11/07/2018 03:11	WG1192418
(S) Dibromofluoromethane	92.1			65.0-129		11/07/2018 15:04	WG1192776
(S) 4-Bromofluorobenzene	111			67.0-138		11/03/2018 22:41	WG1190959
(S) 4-Bromofluorobenzene	102			67.0-138		11/07/2018 03:11	WG1192418
(S) 4-Bromofluorobenzene	110			67.0-138		11/07/2018 15:04	WG1192776

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	8.08		1.42	4.26	1	11/07/2018 15:23	WG1191272
Residual Range Organics (RRO)	46.3		3.55	10.6	1	11/07/2018 15:23	WG1191272
(S) o-Terphenyl	46.1			18.0-148		11/07/2018 15:23	WG1191272

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00373	0.0181	1	11/04/2018 08:00	WG1190707
PCB 1221	U		0.00572	0.0181	1	11/04/2018 08:00	WG1190707
PCB 1232	U		0.00444	0.0181	1	11/04/2018 08:00	WG1190707
PCB 1242	U		0.00339	0.0181	1	11/04/2018 08:00	WG1190707
PCB 1248	U		0.00335	0.0181	1	11/04/2018 08:00	WG1190707
PCB 1254	U		0.00502	0.0181	1	11/04/2018 08:00	WG1190707
PCB 1260	0.154		0.00526	0.0181	1	11/04/2018 08:00	WG1190707
(S) Decachlorobiphenyl	59.6			10.0-135		11/04/2018 08:00	WG1190707
(S) Tetrachloro-m-xylene	62.9			10.0-139		11/04/2018 08:00	WG1190707



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.5		1	11/05/2018 13:57	WG1190827

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0566		0.0303	0.0553	2	11/07/2018 03:31	WG1192418
Acrylonitrile	U		0.00420	0.0276	2	11/03/2018 23:00	WG1190959
Benzene	0.000918	J	0.000884	0.00221	2	11/03/2018 23:00	WG1190959
Bromobenzene	U		0.00232	0.0276	2	11/03/2018 23:00	WG1190959
Bromodichloromethane	U		0.00175	0.00553	2	11/07/2018 03:31	WG1192418
Bromoform	U		0.0133	0.0553	2	11/03/2018 23:00	WG1190959
Bromomethane	U	J3	0.00818	0.0276	2	11/03/2018 23:00	WG1190959
n-Butylbenzene	U		0.00849	0.0276	2	11/03/2018 23:00	WG1190959
sec-Butylbenzene	U		0.00559	0.0276	2	11/03/2018 23:00	WG1190959
tert-Butylbenzene	U		0.00343	0.0111	2	11/03/2018 23:00	WG1190959
Carbon tetrachloride	U		0.00239	0.0111	2	11/03/2018 23:00	WG1190959
Chlorobenzene	U		0.00127	0.00553	2	11/03/2018 23:00	WG1190959
Chlorodibromomethane	U		0.000995	0.00553	2	11/03/2018 23:00	WG1190959
Chloroethane	U		0.00239	0.0111	2	11/03/2018 23:00	WG1190959
Chloroform	U		0.000917	0.00553	2	11/03/2018 23:00	WG1190959
Chloromethane	U		0.00307	0.0276	2	11/03/2018 23:00	WG1190959
2-Chlorotoluene	U		0.00203	0.00553	2	11/03/2018 23:00	WG1190959
4-Chlorotoluene	U		0.00250	0.0111	2	11/03/2018 23:00	WG1190959
1,2-Dibromo-3-Chloropropane	U		0.0113	0.0553	2	11/03/2018 23:00	WG1190959
1,2-Dibromoethane	U		0.00116	0.00553	2	11/03/2018 23:00	WG1190959
Dibromomethane	U		0.00221	0.0111	2	11/03/2018 23:00	WG1190959
1,2-Dichlorobenzene	U		0.00321	0.0111	2	11/03/2018 23:00	WG1190959
1,3-Dichlorobenzene	U		0.00376	0.0111	2	11/07/2018 03:31	WG1192418
1,4-Dichlorobenzene	U		0.00435	0.0111	2	11/03/2018 23:00	WG1190959
Dichlorodifluoromethane	U		0.00181	0.00553	2	11/03/2018 23:00	WG1190959
1,1-Dichloroethane	U		0.00127	0.00553	2	11/03/2018 23:00	WG1190959
1,2-Dichloroethane	U		0.00105	0.00553	2	11/03/2018 23:00	WG1190959
1,1-Dichloroethene	U		0.00111	0.00553	2	11/03/2018 23:00	WG1190959
cis-1,2-Dichloroethene	U		0.00153	0.00553	2	11/03/2018 23:00	WG1190959
trans-1,2-Dichloroethene	U		0.00316	0.0111	2	11/03/2018 23:00	WG1190959
1,2-Dichloropropane	U		0.00281	0.0111	2	11/07/2018 03:31	WG1192418
1,1-Dichloropropene	U		0.00155	0.00553	2	11/03/2018 23:00	WG1190959
1,3-Dichloropropane	U		0.00387	0.0111	2	11/03/2018 23:00	WG1190959
cis-1,3-Dichloropropene	U		0.00150	0.00553	2	11/03/2018 23:00	WG1190959
trans-1,3-Dichloropropene	U		0.00338	0.0111	2	11/03/2018 23:00	WG1190959
2,2-Dichloropropane	U		0.00176	0.00553	2	11/03/2018 23:00	WG1190959
Di-isopropyl ether	U		0.000774	0.00221	2	11/03/2018 23:00	WG1190959
Ethylbenzene	U		0.00117	0.00553	2	11/03/2018 23:00	WG1190959
Hexachloro-1,3-butadiene	U		0.0281	0.0553	2	11/03/2018 23:00	WG1190959
Isopropylbenzene	U		0.00191	0.00553	2	11/03/2018 23:00	WG1190959
p-Isopropyltoluene	U		0.00515	0.0111	2	11/03/2018 23:00	WG1190959
2-Butanone (MEK)	U	J3	0.0276	0.0553	2	11/03/2018 23:00	WG1190959
Methylene Chloride	U		0.0147	0.0553	2	11/03/2018 23:00	WG1190959
4-Methyl-2-pentanone (MIBK)	U		0.0221	0.0553	2	11/03/2018 23:00	WG1190959
Methyl tert-butyl ether	U		0.000652	0.00221	2	11/03/2018 23:00	WG1190959
Naphthalene	0.0213	J	0.00690	0.0276	2	11/03/2018 23:00	WG1190959
n-Propylbenzene	U		0.00261	0.0111	2	11/03/2018 23:00	WG1190959
Styrene	U		0.00603	0.0276	2	11/03/2018 23:00	WG1190959
1,1,1,2-Tetrachloroethane	U		0.00111	0.00553	2	11/03/2018 23:00	WG1190959
1,1,2,2-Tetrachloroethane	U		0.000862	0.00553	2	11/03/2018 23:00	WG1190959

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.00149	0.00553	2	11/03/2018 23:00	WG1190959
Tetrachloroethene	0.0910		0.00155	0.00553	2	11/03/2018 23:00	WG1190959
Toluene	0.00309	U	0.00276	0.0111	2	11/03/2018 23:00	WG1190959
1,2,3-Trichlorobenzene	U		0.00138	0.00553	2	11/07/2018 15:23	WG1192776
1,2,4-Trichlorobenzene	U		0.0107	0.0276	2	11/03/2018 23:00	WG1190959
1,1,1-Trichloroethane	U		0.000608	0.00553	2	11/03/2018 23:00	WG1190959
1,1,2-Trichloroethane	U		0.00196	0.00553	2	11/03/2018 23:00	WG1190959
Trichloroethene	U		0.000884	0.00221	2	11/07/2018 03:31	WG1192418
Trichlorofluoromethane	U		0.00111	0.00553	2	11/03/2018 23:00	WG1190959
1,2,3-Trichloropropane	U		0.0113	0.0276	2	11/03/2018 23:00	WG1190959
1,2,4-Trimethylbenzene	0.00346	U	0.00256	0.0111	2	11/03/2018 23:00	WG1190959
1,2,3-Trimethylbenzene	U		0.00254	0.0111	2	11/03/2018 23:00	WG1190959
Vinyl chloride	U		0.00151	0.00553	2	11/03/2018 23:00	WG1190959
1,3,5-Trimethylbenzene	U		0.00239	0.0111	2	11/03/2018 23:00	WG1190959
Xylenes, Total	U		0.0106	0.0144	2	11/03/2018 23:00	WG1190959
(S) Toluene-d8	112			75.0-131		11/03/2018 23:00	WG1190959
(S) Toluene-d8	103			75.0-131		11/07/2018 03:31	WG1192418
(S) Toluene-d8	113			75.0-131		11/07/2018 15:23	WG1192776
(S) Dibromofluoromethane	104			65.0-129		11/03/2018 23:00	WG1190959
(S) Dibromofluoromethane	90.1			65.0-129		11/07/2018 03:31	WG1192418
(S) Dibromofluoromethane	99.0			65.0-129		11/07/2018 15:23	WG1192776
(S) 4-Bromofluorobenzene	113			67.0-138		11/03/2018 23:00	WG1190959
(S) 4-Bromofluorobenzene	102			67.0-138		11/07/2018 03:31	WG1192418
(S) 4-Bromofluorobenzene	114			67.0-138		11/07/2018 15:23	WG1192776

Sample Narrative:

L1039720-03 WG1190959: Lowest possible dilution due to low sample volume.

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	22.7		1.47	4.42	1	11/07/2018 15:39	WG1191272
Residual Range Organics (RRO)	113		3.68	11.1	1	11/07/2018 15:39	WG1191272
(S) o-Terphenyl	42.9			18.0-148		11/07/2018 15:39	WG1191272

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00387	0.0188	1	11/04/2018 08:14	WG1190707
PCB 1221	U		0.00593	0.0188	1	11/04/2018 08:14	WG1190707
PCB 1232	U		0.00461	0.0188	1	11/04/2018 08:14	WG1190707
PCB 1242	U		0.00351	0.0188	1	11/04/2018 08:14	WG1190707
PCB 1248	U		0.00348	0.0188	1	11/04/2018 08:14	WG1190707
PCB 1254	U		0.00522	0.0188	1	11/04/2018 08:14	WG1190707
PCB 1260	0.170		0.00546	0.0188	1	11/04/2018 08:14	WG1190707
(S) Decachlorobiphenyl	53.8			10.0-135		11/04/2018 08:14	WG1190707
(S) Tetrachloro-m-xylene	61.4			10.0-139		11/04/2018 08:14	WG1190707

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.8		1	11/05/2018 13:57	WG1190827

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0151	0.0275	1	11/07/2018 03:51	WG1192418
Acrylonitrile	U		0.00209	0.0138	1	11/04/2018 10:14	WG1190959
Benzene	U		0.000440	0.00110	1	11/04/2018 10:14	WG1190959
Bromobenzene	U		0.00116	0.0138	1	11/04/2018 10:14	WG1190959
Bromodichloromethane	U		0.000868	0.00275	1	11/07/2018 03:51	WG1192418
Bromoform	U		0.00658	0.0275	1	11/04/2018 10:14	WG1190959
Bromomethane	U	J3	0.00407	0.0138	1	11/04/2018 10:14	WG1190959
n-Butylbenzene	U		0.00423	0.0138	1	11/04/2018 10:14	WG1190959
sec-Butylbenzene	U		0.00279	0.0138	1	11/04/2018 10:14	WG1190959
tert-Butylbenzene	U		0.00171	0.00550	1	11/04/2018 10:14	WG1190959
Carbon tetrachloride	U		0.00119	0.00550	1	11/04/2018 10:14	WG1190959
Chlorobenzene	U		0.000631	0.00275	1	11/04/2018 10:14	WG1190959
Chlorodibromomethane	U		0.000495	0.00275	1	11/04/2018 10:14	WG1190959
Chloroethane	U		0.00119	0.00550	1	11/04/2018 10:14	WG1190959
Chloroform	U		0.000457	0.00275	1	11/04/2018 10:14	WG1190959
Chloromethane	U		0.00153	0.0138	1	11/04/2018 10:14	WG1190959
2-Chlorotoluene	U		0.00101	0.00275	1	11/04/2018 10:14	WG1190959
4-Chlorotoluene	U		0.00124	0.00550	1	11/04/2018 10:14	WG1190959
1,2-Dibromo-3-Chloropropane	U		0.00561	0.0275	1	11/04/2018 10:14	WG1190959
1,2-Dibromoethane	U		0.000578	0.00275	1	11/04/2018 10:14	WG1190959
Dibromomethane	U		0.00110	0.00550	1	11/04/2018 10:14	WG1190959
1,2-Dichlorobenzene	U		0.00160	0.00550	1	11/04/2018 10:14	WG1190959
1,3-Dichlorobenzene	U		0.00187	0.00550	1	11/07/2018 03:51	WG1192418
1,4-Dichlorobenzene	U		0.00217	0.00550	1	11/04/2018 10:14	WG1190959
Dichlorodifluoromethane	U		0.000901	0.00275	1	11/04/2018 10:14	WG1190959
1,1-Dichloroethane	U		0.000633	0.00275	1	11/04/2018 10:14	WG1190959
1,2-Dichloroethane	U		0.000523	0.00275	1	11/04/2018 10:14	WG1190959
1,1-Dichloroethene	U		0.000550	0.00275	1	11/04/2018 10:14	WG1190959
cis-1,2-Dichloroethene	U		0.000760	0.00275	1	11/04/2018 10:14	WG1190959
trans-1,2-Dichloroethene	U		0.00157	0.00550	1	11/04/2018 10:14	WG1190959
1,2-Dichloropropane	U		0.00140	0.00550	1	11/07/2018 03:51	WG1192418
1,1-Dichloropropene	U		0.000771	0.00275	1	11/04/2018 10:14	WG1190959
1,3-Dichloropropane	U		0.00193	0.00550	1	11/04/2018 10:14	WG1190959
cis-1,3-Dichloropropene	U		0.000746	0.00275	1	11/04/2018 10:14	WG1190959
trans-1,3-Dichloropropene	U		0.00168	0.00550	1	11/04/2018 10:14	WG1190959
2,2-Dichloropropane	U		0.000873	0.00275	1	11/04/2018 10:14	WG1190959
Di-isopropyl ether	U		0.000385	0.00110	1	11/04/2018 10:14	WG1190959
Ethylbenzene	U		0.000584	0.00275	1	11/04/2018 10:14	WG1190959
Hexachloro-1,3-butadiene	U		0.0140	0.0275	1	11/04/2018 10:14	WG1190959
Isopropylbenzene	U		0.000950	0.00275	1	11/04/2018 10:14	WG1190959
p-Isopropyltoluene	U		0.00257	0.00550	1	11/04/2018 10:14	WG1190959
2-Butanone (MEK)	0.0244	J J3	0.0138	0.0275	1	11/04/2018 10:14	WG1190959
Methylene Chloride	U		0.00731	0.0275	1	11/04/2018 10:14	WG1190959
4-Methyl-2-pentanone (MIBK)	U		0.0110	0.0275	1	11/04/2018 10:14	WG1190959
Methyl tert-butyl ether	U		0.000325	0.00110	1	11/04/2018 10:14	WG1190959
Naphthalene	U		0.00344	0.0138	1	11/04/2018 10:14	WG1190959
n-Propylbenzene	U		0.00130	0.00550	1	11/04/2018 10:14	WG1190959
Styrene	U		0.00301	0.0138	1	11/04/2018 10:14	WG1190959
1,1,1,2-Tetrachloroethane	U		0.000550	0.00275	1	11/04/2018 10:14	WG1190959
1,1,2,2-Tetrachloroethane	U		0.000429	0.00275	1	11/04/2018 10:14	WG1190959

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.000743	0.00275	1	11/04/2018 10:14	WG1190959
Tetrachloroethene	0.292		0.000771	0.00275	1	11/04/2018 10:14	WG1190959
Toluene	U		0.00138	0.00550	1	11/04/2018 10:14	WG1190959
1,2,3-Trichlorobenzene	U		0.000688	0.00275	1	11/04/2018 10:14	WG1190959
1,2,4-Trichlorobenzene	U		0.00531	0.0138	1	11/04/2018 10:14	WG1190959
1,1,1-Trichloroethane	U		0.000303	0.00275	1	11/04/2018 10:14	WG1190959
1,1,2-Trichloroethane	U		0.000972	0.00275	1	11/04/2018 10:14	WG1190959
Trichloroethene	U		0.000440	0.00110	1	11/07/2018 03:51	WG1192418
Trichlorofluoromethane	U		0.000550	0.00275	1	11/04/2018 10:14	WG1190959
1,2,3-Trichloropropane	U		0.00561	0.0138	1	11/04/2018 10:14	WG1190959
1,2,4-Trimethylbenzene	U		0.00128	0.00550	1	11/04/2018 10:14	WG1190959
1,2,3-Trimethylbenzene	U		0.00127	0.00550	1	11/04/2018 10:14	WG1190959
Vinyl chloride	U		0.000752	0.00275	1	11/04/2018 10:14	WG1190959
1,3,5-Trimethylbenzene	U		0.00119	0.00550	1	11/04/2018 10:14	WG1190959
Xylenes, Total	U		0.00526	0.00716	1	11/04/2018 10:14	WG1190959
(S) Toluene-d8	113			75.0-131		11/04/2018 10:14	WG1190959
(S) Toluene-d8	110			75.0-131		11/07/2018 03:51	WG1192418
(S) Dibromofluoromethane	96.6			65.0-129		11/04/2018 10:14	WG1190959
(S) Dibromofluoromethane	90.9			65.0-129		11/07/2018 03:51	WG1192418
(S) 4-Bromofluorobenzene	110			67.0-138		11/04/2018 10:14	WG1190959
(S) 4-Bromofluorobenzene	122			67.0-138		11/07/2018 03:51	WG1192418

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1660		14.6	44.0	10	11/06/2018 21:19	WG1192533
Residual Range Organics (RRO)	5460		183	550	50	11/06/2018 23:53	WG1192533
(S) o-Terphenyl	0.000	JZ		18.0-148		11/06/2018 23:53	WG1192533
(S) o-Terphenyl	69.1			18.0-148		11/06/2018 21:19	WG1192533

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00385	0.0187	1	11/04/2018 08:28	WG1190707
PCB 1221	U		0.00591	0.0187	1	11/04/2018 08:28	WG1190707
PCB 1232	U		0.00459	0.0187	1	11/04/2018 08:28	WG1190707
PCB 1242	U		0.00350	0.0187	1	11/04/2018 08:28	WG1190707
PCB 1248	U		0.00347	0.0187	1	11/04/2018 08:28	WG1190707
PCB 1254	U		0.00520	0.0187	1	11/04/2018 08:28	WG1190707
PCB 1260	0.0950		0.00544	0.0187	1	11/04/2018 08:28	WG1190707
(S) Decachlorobiphenyl	64.3			10.0-135		11/04/2018 08:28	WG1190707
(S) Tetrachloro-m-xylene	63.0			10.0-139		11/04/2018 08:28	WG1190707



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.5		1	11/05/2018 14:13	WG1190828

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	97.6		7.35	22.1	5	11/06/2018 20:39	WG1192533
Residual Range Organics (RRO)	338		18.3	55.2	5	11/06/2018 20:39	WG1192533
(S) o-Terphenyl	42.4			18.0-148		11/06/2018 20:39	WG1192533

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
PCB 1016	U		0.00387	0.0188	1	11/04/2018 08:42	WG1190707
PCB 1221	U		0.00593	0.0188	1	11/04/2018 08:42	WG1190707
PCB 1232	U		0.00461	0.0188	1	11/04/2018 08:42	WG1190707
PCB 1242	U		0.00351	0.0188	1	11/04/2018 08:42	WG1190707
PCB 1248	U		0.00348	0.0188	1	11/04/2018 08:42	WG1190707
PCB 1254	U		0.00521	0.0188	1	11/04/2018 08:42	WG1190707
PCB 1260	U		0.00546	0.0188	1	11/04/2018 08:42	WG1190707
(S) Decachlorobiphenyl	62.4			10.0-135		11/04/2018 08:42	WG1190707
(S) Tetrachloro-m-xylene	68.6			10.0-139		11/04/2018 08:42	WG1190707

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.2		1	11/05/2018 14:13	WG1190828

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	69.5		14.6	43.9	10	11/06/2018 21:06	WG1192533
Residual Range Organics (RRO)	522		36.5	110	10	11/06/2018 21:06	WG1192533
(S) o-Terphenyl	67.5			18.0-148		11/06/2018 21:06	WG1192533

6 Qc

7 Gl

8 Al

9 Sc

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
PCB 1016	U		0.00384	0.0186	1	11/04/2018 08:56	WG1190707
PCB 1221	U		0.00589	0.0186	1	11/04/2018 08:56	WG1190707
PCB 1232	U		0.00457	0.0186	1	11/04/2018 08:56	WG1190707
PCB 1242	U		0.00349	0.0186	1	11/04/2018 08:56	WG1190707
PCB 1248	U		0.00345	0.0186	1	11/04/2018 08:56	WG1190707
PCB 1254	U		0.00517	0.0186	1	11/04/2018 08:56	WG1190707
PCB 1260	U		0.00542	0.0186	1	11/04/2018 08:56	WG1190707
(S) Decachlorobiphenyl	53.6			10.0-135		11/04/2018 08:56	WG1190707
(S) Tetrachloro-m-xylene	65.5			10.0-139		11/04/2018 08:56	WG1190707



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.9		1	11/05/2018 14:13	WG1190828

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0119	<u>J</u>	0.00319	0.0228	1	11/01/2018 16:41	WG1189729

Metals (ICP) by Method 6010D

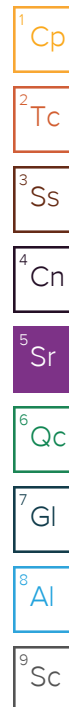
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	0.641	<u>J</u>	0.523	2.28	1	11/04/2018 13:16	WG1189927
Barium	231	<u>J6</u>	0.193	0.569	1	11/04/2018 13:16	WG1189927
Cadmium	U		0.0796	0.569	1	11/04/2018 13:16	WG1189927
Chromium	13.5	<u>O1</u>	0.159	1.14	1	11/04/2018 13:16	WG1189927
Lead	5.69		0.216	0.569	1	11/04/2018 13:16	WG1189927
Selenium	U		0.705	2.28	1	11/04/2018 13:16	WG1189927
Silver	U		0.137	1.14	1	11/04/2018 13:16	WG1189927

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.27	<u>B J</u>	0.965	2.84	25	11/05/2018 14:36	WG1191444
(S) a,a,a-Trifluorotoluene(FID)	98.1			77.0-120		11/05/2018 14:36	WG1191444

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0156	0.0284	1	11/07/2018 04:10	WG1192418
Acrylonitrile	U		0.00216	0.0142	1	11/04/2018 10:33	WG1190959
Benzene	U		0.000455	0.00114	1	11/04/2018 10:33	WG1190959
Bromobenzene	U		0.00119	0.0142	1	11/04/2018 10:33	WG1190959
Bromodichloromethane	U		0.000897	0.00284	1	11/07/2018 04:10	WG1192418
Bromoform	U		0.00680	0.0284	1	11/04/2018 10:33	WG1190959
Bromomethane	U	<u>J3</u>	0.00421	0.0142	1	11/04/2018 10:33	WG1190959
n-Butylbenzene	U		0.00437	0.0142	1	11/04/2018 10:33	WG1190959
sec-Butylbenzene	U		0.00288	0.0142	1	11/04/2018 10:33	WG1190959
tert-Butylbenzene	U		0.00176	0.00569	1	11/04/2018 10:33	WG1190959
Carbon tetrachloride	U		0.00123	0.00569	1	11/04/2018 10:33	WG1190959
Chlorobenzene	U		0.000652	0.00284	1	11/04/2018 10:33	WG1190959
Chlorodibromomethane	U		0.000512	0.00284	1	11/04/2018 10:33	WG1190959
Chloroethane	U		0.00123	0.00569	1	11/04/2018 10:33	WG1190959
Chloroform	U		0.000472	0.00284	1	11/04/2018 10:33	WG1190959
Chloromethane	U		0.00158	0.0142	1	11/04/2018 10:33	WG1190959
2-Chlorotoluene	U		0.00105	0.00284	1	11/04/2018 10:33	WG1190959
4-Chlorotoluene	U		0.00129	0.00569	1	11/04/2018 10:33	WG1190959
1,2-Dibromo-3-Chloropropane	U		0.00580	0.0284	1	11/04/2018 10:33	WG1190959
1,2-Dibromoethane	U		0.000597	0.00284	1	11/04/2018 10:33	WG1190959
Dibromomethane	U		0.00114	0.00569	1	11/04/2018 10:33	WG1190959
1,2-Dichlorobenzene	U		0.00165	0.00569	1	11/04/2018 10:33	WG1190959
1,3-Dichlorobenzene	U		0.00193	0.00569	1	11/07/2018 04:10	WG1192418
1,4-Dichlorobenzene	U		0.00224	0.00569	1	11/04/2018 10:33	WG1190959
Dichlorodifluoromethane	U		0.000931	0.00284	1	11/04/2018 10:33	WG1190959
1,1-Dichloroethane	U		0.000654	0.00284	1	11/04/2018 10:33	WG1190959
1,2-Dichloroethane	U		0.000540	0.00284	1	11/04/2018 10:33	WG1190959





Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	U		0.000569	0.00284	1	11/04/2018 10:33	WG1190959
cis-1,2-Dichloroethene	U		0.000785	0.00284	1	11/04/2018 10:33	WG1190959
trans-1,2-Dichloroethene	U		0.00163	0.00569	1	11/04/2018 10:33	WG1190959
1,2-Dichloropropane	U		0.00145	0.00569	1	11/07/2018 04:10	WG1192418
1,1-Dichloropropene	U		0.000796	0.00284	1	11/04/2018 10:33	WG1190959
1,3-Dichloropropane	U		0.00199	0.00569	1	11/04/2018 10:33	WG1190959
cis-1,3-Dichloropropene	U		0.000771	0.00284	1	11/04/2018 10:33	WG1190959
trans-1,3-Dichloropropene	U		0.00174	0.00569	1	11/04/2018 10:33	WG1190959
2,2-Dichloropropane	U		0.000902	0.00284	1	11/04/2018 10:33	WG1190959
Di-isopropyl ether	U		0.000398	0.00114	1	11/04/2018 10:33	WG1190959
Ethylbenzene	U		0.000603	0.00284	1	11/04/2018 10:33	WG1190959
Hexachloro-1,3-butadiene	U		0.0145	0.0284	1	11/04/2018 10:33	WG1190959
Isopropylbenzene	U		0.000982	0.00284	1	11/04/2018 10:33	WG1190959
p-Isopropyltoluene	U		0.00265	0.00569	1	11/04/2018 10:33	WG1190959
2-Butanone (MEK)	U	J3	0.0142	0.0284	1	11/04/2018 10:33	WG1190959
Methylene Chloride	U		0.00756	0.0284	1	11/04/2018 10:33	WG1190959
4-Methyl-2-pentanone (MIBK)	U		0.0114	0.0284	1	11/04/2018 10:33	WG1190959
Methyl tert-butyl ether	U		0.000336	0.00114	1	11/04/2018 10:33	WG1190959
Naphthalene	U		0.00355	0.0142	1	11/04/2018 10:33	WG1190959
n-Propylbenzene	U		0.00134	0.00569	1	11/04/2018 10:33	WG1190959
Styrene	U		0.00311	0.0142	1	11/04/2018 10:33	WG1190959
1,1,1,2-Tetrachloroethane	U		0.000569	0.00284	1	11/04/2018 10:33	WG1190959
1,1,2,2-Tetrachloroethane	U		0.000444	0.00284	1	11/04/2018 10:33	WG1190959
1,1,2-Trichlorotrifluoroethane	U		0.000768	0.00284	1	11/04/2018 10:33	WG1190959
Tetrachloroethene	U		0.000796	0.00284	1	11/04/2018 10:33	WG1190959
Toluene	0.00143	U	0.00142	0.00569	1	11/04/2018 10:33	WG1190959
1,2,3-Trichlorobenzene	U		0.000711	0.00284	1	11/04/2018 10:33	WG1190959
1,2,4-Trichlorobenzene	U		0.00548	0.0142	1	11/04/2018 10:33	WG1190959
1,1,1-Trichloroethane	U		0.000313	0.00284	1	11/04/2018 10:33	WG1190959
1,1,2-Trichloroethane	U		0.00100	0.00284	1	11/04/2018 10:33	WG1190959
Trichloroethene	U		0.000455	0.00114	1	11/07/2018 04:10	WG1192418
Trichlorofluoromethane	U		0.000569	0.00284	1	11/04/2018 10:33	WG1190959
1,2,3-Trichloropropane	U		0.00580	0.0142	1	11/04/2018 10:33	WG1190959
1,2,4-Trimethylbenzene	0.00282	U	0.00132	0.00569	1	11/04/2018 10:33	WG1190959
1,2,3-Trimethylbenzene	U		0.00131	0.00569	1	11/04/2018 10:33	WG1190959
Vinyl chloride	U		0.000777	0.00284	1	11/04/2018 10:33	WG1190959
1,3,5-Trimethylbenzene	U		0.00123	0.00569	1	11/04/2018 10:33	WG1190959
Xylenes, Total	U		0.00544	0.00740	1	11/04/2018 10:33	WG1190959
(S) Toluene-d8	115			75.0-131		11/04/2018 10:33	WG1190959
(S) Toluene-d8	105			75.0-131		11/07/2018 04:10	WG1192418
(S) Dibromofluoromethane	95.7			65.0-129		11/04/2018 10:33	WG1190959
(S) Dibromofluoromethane	87.4			65.0-129		11/07/2018 04:10	WG1192418
(S) 4-Bromofluorobenzene	112			67.0-138		11/04/2018 10:33	WG1190959
(S) 4-Bromofluorobenzene	99.0			67.0-138		11/07/2018 04:10	WG1192418

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	11.6		1.51	4.55	1	11/07/2018 15:55	WG1191272
Residual Range Organics (RRO)	63.7		3.79	11.4	1	11/07/2018 15:55	WG1191272
(S) o-Terphenyl	51.7			18.0-148		11/07/2018 15:55	WG1191272



Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00398	0.0193	1	11/04/2018 09:10	WG1190707
PCB 1221	U		0.00611	0.0193	1	11/04/2018 09:10	WG1190707
PCB 1232	U		0.00474	0.0193	1	11/04/2018 09:10	WG1190707
PCB 1242	U		0.00362	0.0193	1	11/04/2018 09:10	WG1190707
PCB 1248	U		0.00358	0.0193	1	11/04/2018 09:10	WG1190707
PCB 1254	U		0.00537	0.0193	1	11/04/2018 09:10	WG1190707
PCB 1260	U		0.00562	0.0193	1	11/04/2018 09:10	WG1190707
(S) Decachlorobiphenyl	52.6			10.0-135		11/04/2018 09:10	WG1190707
(S) Tetrachloro-m-xylene	65.5			10.0-139		11/04/2018 09:10	WG1190707

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00730	0.0379	1	11/06/2018 02:55	WG1191265
Acenaphthylene	U		0.00763	0.0379	1	11/06/2018 02:55	WG1191265
Anthracene	U		0.00719	0.0379	1	11/06/2018 02:55	WG1191265
Benzo(a)anthracene	U		0.00487	0.0379	1	11/06/2018 02:55	WG1191265
Benzo(b)fluoranthene	U	J3	0.00791	0.0379	1	11/06/2018 02:55	WG1191265
Benzo(k)fluoranthene	U		0.00662	0.0379	1	11/06/2018 02:55	WG1191265
Benzo(g,h,i)perylene	U		0.00820	0.0379	1	11/06/2018 02:55	WG1191265
Benzo(a)pyrene	U	J3	0.00624	0.0379	1	11/06/2018 02:55	WG1191265
Bis(2-chlorethoxy)methane	U		0.00876	0.379	1	11/06/2018 02:55	WG1191265
Bis(2-chloroethyl)ether	U		0.0102	0.379	1	11/06/2018 02:55	WG1191265
Bis(2-chloroisopropyl)ether	U		0.00865	0.379	1	11/06/2018 02:55	WG1191265
4-Bromophenyl-phenylether	U		0.0130	0.379	1	11/06/2018 02:55	WG1191265
2-Chloronaphthalene	U		0.00727	0.0379	1	11/06/2018 02:55	WG1191265
4-Chlorophenyl-phenylether	U		0.00713	0.379	1	11/06/2018 02:55	WG1191265
Chrysene	U	J3	0.00631	0.0379	1	11/06/2018 02:55	WG1191265
Dibenz(a,h)anthracene	U		0.00934	0.0379	1	11/06/2018 02:55	WG1191265
3,3-Dichlorobenzidine	U		0.0903	0.379	1	11/06/2018 02:55	WG1191265
2,4-Dinitrotoluene	U		0.00691	0.379	1	11/06/2018 02:55	WG1191265
2,6-Dinitrotoluene	U	J3	0.00839	0.379	1	11/06/2018 02:55	WG1191265
Fluoranthene	U		0.00564	0.0379	1	11/06/2018 02:55	WG1191265
Fluorene	U		0.00776	0.0379	1	11/06/2018 02:55	WG1191265
Hexachlorobenzene	U		0.00974	0.379	1	11/06/2018 02:55	WG1191265
Hexachloro-1,3-butadiene	U		0.0114	0.379	1	11/06/2018 02:55	WG1191265
Hexachlorocyclopentadiene	U		0.0668	0.379	1	11/06/2018 02:55	WG1191265
Hexachloroethane	U		0.0152	0.379	1	11/06/2018 02:55	WG1191265
Indeno(1,2,3-cd)pyrene	U	J3	0.00878	0.0379	1	11/06/2018 02:55	WG1191265
Isophorone	U		0.00594	0.379	1	11/06/2018 02:55	WG1191265
Naphthalene	U		0.0101	0.0379	1	11/06/2018 02:55	WG1191265
Nitrobenzene	U		0.00791	0.379	1	11/06/2018 02:55	WG1191265
n-Nitrosodimethylamine	U		0.0736	0.379	1	11/06/2018 02:55	WG1191265
n-Nitrosodiphenylamine	U		0.102	0.379	1	11/06/2018 02:55	WG1191265
n-Nitrosodi-n-propylamine	U		0.0103	0.379	1	11/06/2018 02:55	WG1191265
Phenanthrene	U		0.00601	0.0379	1	11/06/2018 02:55	WG1191265
Benzylbutyl phthalate	U		0.0117	0.379	1	11/06/2018 02:55	WG1191265
Bis(2-ethylhexyl)phthalate	0.0174	J	0.0137	0.379	1	11/06/2018 02:55	WG1191265
Di-n-butyl phthalate	U	J3	0.0124	0.379	1	11/06/2018 02:55	WG1191265
Diethyl phthalate	U		0.00786	0.379	1	11/06/2018 02:55	WG1191265
Dimethyl phthalate	U		0.00614	0.379	1	11/06/2018 02:55	WG1191265
Di-n-octyl phthalate	U		0.0103	0.379	1	11/06/2018 02:55	WG1191265
Pyrene	U		0.0140	0.0379	1	11/06/2018 02:55	WG1191265
1,2,4-Trichlorobenzene	U		0.00997	0.379	1	11/06/2018 02:55	WG1191265
4-Chloro-3-methylphenol	U		0.00543	0.379	1	11/06/2018 02:55	WG1191265
2-Chlorophenol	U		0.00946	0.379	1	11/06/2018 02:55	WG1191265

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-Dichlorophenol	U		0.00849	0.379	1	11/06/2018 02:55	WG1191265
2,4-Dimethylphenol	U		0.0536	0.379	1	11/06/2018 02:55	WG1191265
4,6-Dinitro-2-methylphenol	U		0.141	0.379	1	11/06/2018 02:55	WG1191265
2,4-Dinitrophenol	U		0.112	0.379	1	11/06/2018 02:55	WG1191265
2-Nitrophenol	U		0.0148	0.379	1	11/06/2018 02:55	WG1191265
4-Nitrophenol	U		0.0597	0.379	1	11/06/2018 02:55	WG1191265
Pentachlorophenol	U	<u>J3</u>	0.0546	0.379	1	11/06/2018 02:55	WG1191265
Phenol	U		0.00791	0.379	1	11/06/2018 02:55	WG1191265
2,4,6-Trichlorophenol	U		0.00886	0.379	1	11/06/2018 02:55	WG1191265
(S) 2-Fluorophenol	71.2			12.0-120		11/06/2018 02:55	WG1191265
(S) Phenol-d5	68.6			10.0-120		11/06/2018 02:55	WG1191265
(S) Nitrobenzene-d5	62.6			10.0-122		11/06/2018 02:55	WG1191265
(S) 2-Fluorobiphenyl	56.3			15.0-120		11/06/2018 02:55	WG1191265
(S) 2,4,6-Tribromophenol	82.7			10.0-127		11/06/2018 02:55	WG1191265
(S) p-Terphenyl-d14	84.3			10.0-120		11/06/2018 02:55	WG1191265

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	37.2		0.176	1.26	1	11/08/2018 13:37	WG1189927

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	79.4		1	11/05/2018 14:13	WG1190828

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	19.2		0.807	2.52	1	11/08/2018 13:37	WG1193182

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0173	J	0.00353	0.0252	1	11/01/2018 16:44	WG1189729

Metals (ICP) by Method 6010D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.39	J	0.580	2.52	1	11/04/2018 13:32	WG1189927
Barium	172		0.214	0.630	1	11/04/2018 13:32	WG1189927
Cadmium	U		0.0882	0.630	1	11/04/2018 13:32	WG1189927
Chromium	56.4		0.176	1.26	1	11/04/2018 13:32	WG1189927
Lead	15.0		0.239	0.630	1	11/04/2018 13:32	WG1189927
Selenium	U		0.781	2.52	1	11/04/2018 13:32	WG1189927
Silver	U		0.151	1.26	1	11/04/2018 13:32	WG1189927

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	1.30	B J	1.07	3.15	25	11/05/2018 14:58	WG1191444
(S) a,a,a-Trifluorotoluene(FID)	98.0			77.0-120		11/05/2018 14:58	WG1191444

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	U		0.0173	0.0315	1	11/07/2018 04:30	WG1192418
Acrylonitrile	U		0.00239	0.0158	1	11/04/2018 10:52	WG1190959
Benzene	0.00194		0.000504	0.00126	1	11/04/2018 10:52	WG1190959
Bromobenzene	U		0.00132	0.0158	1	11/04/2018 10:52	WG1190959
Bromodichloromethane	U		0.000993	0.00315	1	11/07/2018 04:30	WG1192418
Bromoform	U		0.00754	0.0315	1	11/04/2018 10:52	WG1190959
Bromomethane	U	J3	0.00466	0.0158	1	11/04/2018 10:52	WG1190959
n-Butylbenzene	U		0.00484	0.0158	1	11/04/2018 10:52	WG1190959
sec-Butylbenzene	U		0.00319	0.0158	1	11/04/2018 10:52	WG1190959
tert-Butylbenzene	U		0.00195	0.00630	1	11/04/2018 10:52	WG1190959
Carbon tetrachloride	U		0.00136	0.00630	1	11/04/2018 10:52	WG1190959
Chlorobenzene	U		0.000722	0.00315	1	11/04/2018 10:52	WG1190959
Chlorodibromomethane	U		0.000567	0.00315	1	11/04/2018 10:52	WG1190959
Chloroethane	U		0.00136	0.00630	1	11/04/2018 10:52	WG1190959
Chloroform	U		0.000523	0.00315	1	11/04/2018 10:52	WG1190959
Chloromethane	U		0.00175	0.0158	1	11/04/2018 10:52	WG1190959



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Chlorotoluene	U		0.00116	0.00315	1	11/04/2018 10:52	WG1190959
4-Chlorotoluene	U		0.00142	0.00630	1	11/04/2018 10:52	WG1190959
1,2-Dibromo-3-Chloropropane	U		0.00643	0.0315	1	11/04/2018 10:52	WG1190959
1,2-Dibromoethane	U		0.000662	0.00315	1	11/04/2018 10:52	WG1190959
Dibromomethane	U		0.00126	0.00630	1	11/04/2018 10:52	WG1190959
1,2-Dichlorobenzene	U		0.00183	0.00630	1	11/04/2018 10:52	WG1190959
1,3-Dichlorobenzene	U		0.00214	0.00630	1	11/07/2018 04:30	WG1192418
1,4-Dichlorobenzene	U		0.00248	0.00630	1	11/04/2018 10:52	WG1190959
Dichlorodifluoromethane	U		0.00103	0.00315	1	11/04/2018 10:52	WG1190959
1,1-Dichloroethane	U		0.000725	0.00315	1	11/04/2018 10:52	WG1190959
1,2-Dichloroethane	U		0.000599	0.00315	1	11/04/2018 10:52	WG1190959
1,1-Dichloroethene	U		0.000630	0.00315	1	11/04/2018 10:52	WG1190959
cis-1,2-Dichloroethene	U		0.000870	0.00315	1	11/04/2018 10:52	WG1190959
trans-1,2-Dichloroethene	U		0.00180	0.00630	1	11/04/2018 10:52	WG1190959
1,2-Dichloropropane	U		0.00160	0.00630	1	11/07/2018 04:30	WG1192418
1,1-Dichloropropene	U		0.000882	0.00315	1	11/04/2018 10:52	WG1190959
1,3-Dichloropropane	U		0.00221	0.00630	1	11/04/2018 10:52	WG1190959
cis-1,3-Dichloropropene	U		0.000854	0.00315	1	11/04/2018 10:52	WG1190959
trans-1,3-Dichloropropene	U		0.00193	0.00630	1	11/04/2018 10:52	WG1190959
2,2-Dichloropropane	U		0.000999	0.00315	1	11/04/2018 10:52	WG1190959
Di-isopropyl ether	U		0.000441	0.00126	1	11/04/2018 10:52	WG1190959
Ethylbenzene	0.00281	1L	0.000668	0.00315	1	11/04/2018 10:52	WG1190959
Hexachloro-1,3-butadiene	U		0.0160	0.0315	1	11/04/2018 10:52	WG1190959
Isopropylbenzene	U		0.00109	0.00315	1	11/04/2018 10:52	WG1190959
p-Isopropyltoluene	U		0.00294	0.00630	1	11/04/2018 10:52	WG1190959
2-Butanone (MEK)	U	J3	0.0158	0.0315	1	11/04/2018 10:52	WG1190959
Methylene Chloride	U		0.00837	0.0315	1	11/04/2018 10:52	WG1190959
4-Methyl-2-pentanone (MIBK)	U		0.0126	0.0315	1	11/04/2018 10:52	WG1190959
Methyl tert-butyl ether	U		0.000372	0.00126	1	11/04/2018 10:52	WG1190959
Naphthalene	0.00858	1L	0.00393	0.0158	1	11/04/2018 10:52	WG1190959
n-Propylbenzene	U		0.00149	0.00630	1	11/04/2018 10:52	WG1190959
Styrene	U		0.00344	0.0158	1	11/04/2018 10:52	WG1190959
1,1,1,2-Tetrachloroethane	U		0.000630	0.00315	1	11/04/2018 10:52	WG1190959
1,1,2,2-Tetrachloroethane	U		0.000491	0.00315	1	11/04/2018 10:52	WG1190959
1,1,2-Trichlorotrifluoroethane	U		0.000851	0.00315	1	11/04/2018 10:52	WG1190959
Tetrachloroethene	U		0.000882	0.00315	1	11/04/2018 10:52	WG1190959
Toluene	0.0111		0.00158	0.00630	1	11/04/2018 10:52	WG1190959
1,2,3-Trichlorobenzene	U		0.000788	0.00315	1	11/04/2018 10:52	WG1190959
1,2,4-Trichlorobenzene	U		0.00607	0.0158	1	11/04/2018 10:52	WG1190959
1,1,1-Trichloroethane	U		0.000347	0.00315	1	11/04/2018 10:52	WG1190959
1,1,2-Trichloroethane	U		0.00111	0.00315	1	11/04/2018 10:52	WG1190959
Trichloroethene	U		0.000504	0.00126	1	11/07/2018 04:30	WG1192418
Trichlorofluoromethane	U		0.000630	0.00315	1	11/04/2018 10:52	WG1190959
1,2,3-Trichloropropane	U		0.00643	0.0158	1	11/04/2018 10:52	WG1190959
1,2,4-Trimethylbenzene	0.00409	1L	0.00146	0.00630	1	11/04/2018 10:52	WG1190959
1,2,3-Trimethylbenzene	0.00242	1L	0.00145	0.00630	1	11/04/2018 10:52	WG1190959
Vinyl chloride	U		0.000861	0.00315	1	11/04/2018 10:52	WG1190959
1,3,5-Trimethylbenzene	0.00169	1L	0.00136	0.00630	1	11/04/2018 10:52	WG1190959
Xylenes, Total	0.0362		0.00602	0.00819	1	11/04/2018 10:52	WG1190959
(S) Toluene-d8	117			75.0-131		11/04/2018 10:52	WG1190959
(S) Toluene-d8	104			75.0-131		11/07/2018 04:30	WG1192418
(S) Dibromofluoromethane	96.7			65.0-129		11/04/2018 10:52	WG1190959
(S) Dibromofluoromethane	87.4			65.0-129		11/07/2018 04:30	WG1192418
(S) 4-Bromofluorobenzene	112			67.0-138		11/04/2018 10:52	WG1190959
(S) 4-Bromofluorobenzene	98.3			67.0-138		11/07/2018 04:30	WG1192418

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

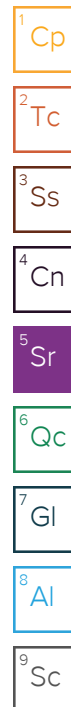
Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	21.0		3.35	10.1	2	11/06/2018 23:11	WG1192533
Residual Range Organics (RRO)	82.4		8.39	25.2	2	11/06/2018 23:11	WG1192533
(S) o-Terphenyl	65.5			18.0-148		11/06/2018 23:11	WG1192533

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00441	0.0214	1	11/04/2018 09:24	WG1190707
PCB 1221	U		0.00677	0.0214	1	11/04/2018 09:24	WG1190707
PCB 1232	U		0.00525	0.0214	1	11/04/2018 09:24	WG1190707
PCB 1242	U		0.00401	0.0214	1	11/04/2018 09:24	WG1190707
PCB 1248	U		0.00397	0.0214	1	11/04/2018 09:24	WG1190707
PCB 1254	U		0.00595	0.0214	1	11/04/2018 09:24	WG1190707
PCB 1260	U		0.00623	0.0214	1	11/04/2018 09:24	WG1190707
(S) Decachlorobiphenyl	45.3			10.0-135		11/04/2018 09:24	WG1190707
(S) Tetrachloro-m-xylene	53.7			10.0-139		11/04/2018 09:24	WG1190707

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0161	0.0839	2	11/06/2018 04:04	WG1191265
Acenaphthylene	U		0.0169	0.0839	2	11/06/2018 04:04	WG1191265
Anthracene	U		0.0159	0.0839	2	11/06/2018 04:04	WG1191265
Benzo(a)anthracene	U		0.0108	0.0839	2	11/06/2018 04:04	WG1191265
Benzo(b)fluoranthene	0.0188	J J3	0.0175	0.0839	2	11/06/2018 04:04	WG1191265
Benzo(k)fluoranthene	U		0.0146	0.0839	2	11/06/2018 04:04	WG1191265
Benzo(g,h,i)perylene	U		0.0181	0.0839	2	11/06/2018 04:04	WG1191265
Benzo(a)pyrene	U	J3	0.0139	0.0839	2	11/06/2018 04:04	WG1191265
Bis(2-chlorethoxy)methane	U		0.0194	0.839	2	11/06/2018 04:04	WG1191265
Bis(2-chloroethyl)ether	U		0.0226	0.839	2	11/06/2018 04:04	WG1191265
Bis(2-chloroisopropyl)ether	U		0.0192	0.839	2	11/06/2018 04:04	WG1191265
4-Bromophenyl-phenylether	U		0.0287	0.839	2	11/06/2018 04:04	WG1191265
2-Chloronaphthalene	U		0.0161	0.0839	2	11/06/2018 04:04	WG1191265
4-Chlorophenyl-phenylether	U		0.0158	0.839	2	11/06/2018 04:04	WG1191265
Chrysene	U	J3	0.0140	0.0839	2	11/06/2018 04:04	WG1191265
Dibenz(a,h)anthracene	U		0.0207	0.0839	2	11/06/2018 04:04	WG1191265
3,3-Dichlorobenzidine	U		0.200	0.839	2	11/06/2018 04:04	WG1191265
2,4-Dinitrotoluene	U		0.0152	0.839	2	11/06/2018 04:04	WG1191265
2,6-Dinitrotoluene	U	J3	0.0185	0.839	2	11/06/2018 04:04	WG1191265
Fluoranthene	0.0156	J	0.0125	0.0839	2	11/06/2018 04:04	WG1191265
Fluorene	U		0.0171	0.0839	2	11/06/2018 04:04	WG1191265
Hexachlorobenzene	U		0.0215	0.839	2	11/06/2018 04:04	WG1191265
Hexachloro-1,3-butadiene	U		0.0252	0.839	2	11/06/2018 04:04	WG1191265
Hexachlorocyclopentadiene	U		0.147	0.839	2	11/06/2018 04:04	WG1191265
Hexachloroethane	U		0.0338	0.839	2	11/06/2018 04:04	WG1191265
Indeno(1,2,3-cd)pyrene	U	J3	0.0194	0.0839	2	11/06/2018 04:04	WG1191265
Isophorone	U		0.0131	0.839	2	11/06/2018 04:04	WG1191265
Naphthalene	U		0.0224	0.0839	2	11/06/2018 04:04	WG1191265
Nitrobenzene	U		0.0175	0.839	2	11/06/2018 04:04	WG1191265
n-Nitrosodimethylamine	U		0.163	0.839	2	11/06/2018 04:04	WG1191265
n-Nitrosodiphenylamine	U		0.227	0.839	2	11/06/2018 04:04	WG1191265
n-Nitrosodi-n-propylamine	U		0.0228	0.839	2	11/06/2018 04:04	WG1191265
Phenanthrene	U		0.0134	0.0839	2	11/06/2018 04:04	WG1191265
Benzylbutyl phthalate	U		0.0260	0.839	2	11/06/2018 04:04	WG1191265
Bis(2-ethylhexyl)phthalate	U		0.0302	0.839	2	11/06/2018 04:04	WG1191265





Collected date/time: 10/29/18 11:25

L1039720

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Di-n-butyl phthalate	U	J3	0.0275	0.839	2	11/06/2018 04:04	WG1191265
Diethyl phthalate	U		0.0174	0.839	2	11/06/2018 04:04	WG1191265
Dimethyl phthalate	U		0.0136	0.839	2	11/06/2018 04:04	WG1191265
Di-n-octyl phthalate	U		0.0228	0.839	2	11/06/2018 04:04	WG1191265
Pyrene	U		0.0310	0.0839	2	11/06/2018 04:04	WG1191265
1,2,4-Trichlorobenzene	U		0.0221	0.839	2	11/06/2018 04:04	WG1191265
4-Chloro-3-methylphenol	U		0.0120	0.839	2	11/06/2018 04:04	WG1191265
2-Chlorophenol	U		0.0209	0.839	2	11/06/2018 04:04	WG1191265
2,4-Dichlorophenol	U		0.0188	0.839	2	11/06/2018 04:04	WG1191265
2,4-Dimethylphenol	U		0.119	0.839	2	11/06/2018 04:04	WG1191265
4,6-Dinitro-2-methylphenol	U		0.313	0.839	2	11/06/2018 04:04	WG1191265
2,4-Dinitrophenol	U		0.247	0.839	2	11/06/2018 04:04	WG1191265
2-Nitrophenol	U		0.0328	0.839	2	11/06/2018 04:04	WG1191265
4-Nitrophenol	U		0.132	0.839	2	11/06/2018 04:04	WG1191265
Pentachlorophenol	U	J3	0.121	0.839	2	11/06/2018 04:04	WG1191265
Phenol	U		0.0175	0.839	2	11/06/2018 04:04	WG1191265
2,4,6-Trichlorophenol	U		0.0197	0.839	2	11/06/2018 04:04	WG1191265
(S) 2-Fluorophenol	85.1			12.0-120		11/06/2018 04:04	WG1191265
(S) Phenol-d5	79.1			10.0-120		11/06/2018 04:04	WG1191265
(S) Nitrobenzene-d5	78.5			10.0-122		11/06/2018 04:04	WG1191265
(S) 2-Fluorobiphenyl	70.2			15.0-120		11/06/2018 04:04	WG1191265
(S) 2,4,6-Tribromophenol	91.2			10.0-127		11/06/2018 04:04	WG1191265
(S) p-Terphenyl-d14	81.2			10.0-120		11/06/2018 04:04	WG1191265

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Sample Narrative:

L1039720-08 WG1191265: Dilution due to matrix impact during extract concentration procedure



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.2		1	11/05/2018 14:13	WG1190828

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	21.2	<u>J</u>	14.1	42.5	10	11/06/2018 21:32	WG1192533
Residual Range Organics (RRO)	155		35.4	106	10	11/06/2018 21:32	WG1192533
(S) o-Terphenyl	84.2			18.0-148		11/06/2018 21:32	WG1192533

Sample Narrative:

L1039720-09 WG1192533: Dilution due to matrix impact during extract concentration procedure

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
PCB 1016	U		0.00372	0.0180	1	11/04/2018 09:38	WG1190707
PCB 1221	U		0.00570	0.0180	1	11/04/2018 09:38	WG1190707
PCB 1232	U		0.00443	0.0180	1	11/04/2018 09:38	WG1190707
PCB 1242	U		0.00338	0.0180	1	11/04/2018 09:38	WG1190707
PCB 1248	U		0.00334	0.0180	1	11/04/2018 09:38	WG1190707
PCB 1254	U		0.00501	0.0180	1	11/04/2018 09:38	WG1190707
PCB 1260	0.0135	<u>J P</u>	0.00524	0.0180	1	11/04/2018 09:38	WG1190707
(S) Decachlorobiphenyl	61.3			10.0-135		11/04/2018 09:38	WG1190707
(S) Tetrachloro-m-xylene	66.9			10.0-139		11/04/2018 09:38	WG1190707

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	40.2		0.152	1.08	1	11/08/2018 13:39	WG1189927

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.2		1	11/05/2018 14:13	WG1190828

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	0.954	J	0.694	2.17	1	11/08/2018 13:39	WG1193182

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0506		0.00304	0.0217	1	11/01/2018 16:47	WG1189729

Metals (ICP) by Method 6010D

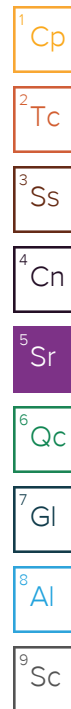
Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	0.641	J	0.499	2.17	1	11/04/2018 13:40	WG1189927
Barium	137		0.184	0.542	1	11/04/2018 13:40	WG1189927
Cadmium	0.596		0.0759	0.542	1	11/04/2018 13:40	WG1189927
Chromium	41.1		0.152	1.08	1	11/04/2018 13:40	WG1189927
Lead	128		0.206	0.542	1	11/04/2018 13:40	WG1189927
Selenium	U		0.672	2.17	1	11/04/2018 13:40	WG1189927
Silver	U		0.130	1.08	1	11/04/2018 13:40	WG1189927

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	0.973	B J	0.920	2.71	25	11/05/2018 15:21	WG1191444
(S) a,a,a-Trifluorotoluene(FID)	98.8			77.0-120		11/05/2018 15:21	WG1191444

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	0.0218	J	0.0149	0.0271	1	11/07/2018 04:50	WG1192418
Acrylonitrile	U		0.00206	0.0136	1	11/04/2018 11:10	WG1190959
Benzene	0.00333		0.000434	0.00108	1	11/04/2018 11:10	WG1190959
Bromobenzene	U		0.00114	0.0136	1	11/04/2018 11:10	WG1190959
Bromodichloromethane	U		0.000855	0.00271	1	11/07/2018 04:50	WG1192418
Bromoform	U		0.00649	0.0271	1	11/04/2018 11:10	WG1190959
Bromomethane	U	J3	0.00401	0.0136	1	11/04/2018 11:10	WG1190959
n-Butylbenzene	U		0.00416	0.0136	1	11/04/2018 11:10	WG1190959
sec-Butylbenzene	U		0.00274	0.0136	1	11/04/2018 11:10	WG1190959
tert-Butylbenzene	U		0.00168	0.00542	1	11/04/2018 11:10	WG1190959
Carbon tetrachloride	U		0.00117	0.00542	1	11/04/2018 11:10	WG1190959
Chlorobenzene	U		0.000621	0.00271	1	11/04/2018 11:10	WG1190959
Chlorodibromomethane	U		0.000488	0.00271	1	11/04/2018 11:10	WG1190959
Chloroethane	U		0.00117	0.00542	1	11/04/2018 11:10	WG1190959
Chloroform	U		0.000450	0.00271	1	11/04/2018 11:10	WG1190959
Chloromethane	U		0.00151	0.0136	1	11/04/2018 11:10	WG1190959



STOCKPILE-1

Collected date/time: 10/29/18 00:00

SAMPLE RESULTS - 10

L1039720

ONE LAB. NATIONWIDE.



Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Chlorotoluene	U		0.000998	0.00271	1	11/04/2018 11:10	WG1190959
4-Chlorotoluene	U		0.00123	0.00542	1	11/04/2018 11:10	WG1190959
1,2-Dibromo-3-Chloropropane	U		0.00553	0.0271	1	11/04/2018 11:10	WG1190959
1,2-Dibromoethane	U		0.000569	0.00271	1	11/04/2018 11:10	WG1190959
Dibromomethane	U		0.00108	0.00542	1	11/04/2018 11:10	WG1190959
1,2-Dichlorobenzene	U		0.00157	0.00542	1	11/04/2018 11:10	WG1190959
1,3-Dichlorobenzene	U		0.00184	0.00542	1	11/07/2018 04:50	WG1192418
1,4-Dichlorobenzene	U		0.00214	0.00542	1	11/04/2018 11:10	WG1190959
Dichlorodifluoromethane	U		0.000887	0.00271	1	11/04/2018 11:10	WG1190959
1,1-Dichloroethane	U		0.000624	0.00271	1	11/04/2018 11:10	WG1190959
1,2-Dichloroethane	U		0.000515	0.00271	1	11/04/2018 11:10	WG1190959
1,1-Dichloroethene	U		0.000542	0.00271	1	11/04/2018 11:10	WG1190959
cis-1,2-Dichloroethene	U		0.000748	0.00271	1	11/04/2018 11:10	WG1190959
trans-1,2-Dichloroethene	U		0.00155	0.00542	1	11/04/2018 11:10	WG1190959
1,2-Dichloropropane	U		0.00138	0.00542	1	11/07/2018 04:50	WG1192418
1,1-Dichloropropene	U		0.000759	0.00271	1	11/04/2018 11:10	WG1190959
1,3-Dichloropropane	U		0.00190	0.00542	1	11/04/2018 11:10	WG1190959
cis-1,3-Dichloropropene	U		0.000735	0.00271	1	11/04/2018 11:10	WG1190959
trans-1,3-Dichloropropene	U		0.00166	0.00542	1	11/04/2018 11:10	WG1190959
2,2-Dichloropropane	U		0.000860	0.00271	1	11/04/2018 11:10	WG1190959
Di-isopropyl ether	U		0.000380	0.00108	1	11/04/2018 11:10	WG1190959
Ethylbenzene	0.00353		0.000575	0.00271	1	11/04/2018 11:10	WG1190959
Hexachloro-1,3-butadiene	U		0.0138	0.0271	1	11/04/2018 11:10	WG1190959
Isopropylbenzene	U		0.000936	0.00271	1	11/04/2018 11:10	WG1190959
p-Isopropyltoluene	U		0.00253	0.00542	1	11/04/2018 11:10	WG1190959
2-Butanone (MEK)	U	J3	0.0136	0.0271	1	11/04/2018 11:10	WG1190959
Methylene Chloride	U		0.00720	0.0271	1	11/04/2018 11:10	WG1190959
4-Methyl-2-pentanone (MIBK)	U		0.0108	0.0271	1	11/04/2018 11:10	WG1190959
Methyl tert-butyl ether	U		0.000320	0.00108	1	11/04/2018 11:10	WG1190959
Naphthalene	0.00673	1J	0.00338	0.0136	1	11/04/2018 11:10	WG1190959
n-Propylbenzene	U		0.00128	0.00542	1	11/04/2018 11:10	WG1190959
Styrene	U		0.00296	0.0136	1	11/04/2018 11:10	WG1190959
1,1,1,2-Tetrachloroethane	U		0.000542	0.00271	1	11/04/2018 11:10	WG1190959
1,1,2,2-Tetrachloroethane	U		0.000423	0.00271	1	11/04/2018 11:10	WG1190959
1,1,2-Trichlorotrifluoroethane	U		0.000732	0.00271	1	11/04/2018 11:10	WG1190959
Tetrachloroethene	U		0.000759	0.00271	1	11/04/2018 11:10	WG1190959
Toluene	0.0117		0.00136	0.00542	1	11/04/2018 11:10	WG1190959
1,2,3-Trichlorobenzene	U		0.000678	0.00271	1	11/04/2018 11:10	WG1190959
1,2,4-Trichlorobenzene	U		0.00523	0.0136	1	11/04/2018 11:10	WG1190959
1,1,1-Trichloroethane	U		0.000298	0.00271	1	11/04/2018 11:10	WG1190959
1,1,2-Trichloroethane	U		0.000958	0.00271	1	11/04/2018 11:10	WG1190959
Trichloroethene	U		0.000434	0.00108	1	11/07/2018 04:50	WG1192418
Trichlorofluoromethane	0.0753		0.000542	0.00271	1	11/04/2018 11:10	WG1190959
1,2,3-Trichloropropane	U		0.00553	0.0136	1	11/04/2018 11:10	WG1190959
1,2,4-Trimethylbenzene	0.00421	1J	0.00126	0.00542	1	11/04/2018 11:10	WG1190959
1,2,3-Trimethylbenzene	0.00231	1J	0.00125	0.00542	1	11/04/2018 11:10	WG1190959
Vinyl chloride	U		0.000741	0.00271	1	11/04/2018 11:10	WG1190959
1,3,5-Trimethylbenzene	0.00171	1J	0.00117	0.00542	1	11/04/2018 11:10	WG1190959
Xylenes, Total	0.0342		0.00518	0.00705	1	11/04/2018 11:10	WG1190959
(S) Toluene-d8	114			75.0-131		11/04/2018 11:10	WG1190959
(S) Toluene-d8	104			75.0-131		11/07/2018 04:50	WG1192418
(S) Dibromofluoromethane	102			65.0-129		11/04/2018 11:10	WG1190959
(S) Dibromofluoromethane	88.1			65.0-129		11/07/2018 04:50	WG1192418
(S) 4-Bromofluorobenzene	112			67.0-138		11/04/2018 11:10	WG1190959
(S) 4-Bromofluorobenzene	92.4			67.0-138		11/07/2018 04:50	WG1192418

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

ACCOUNT:

Associated Environmental - Olympia, WA

PROJECT:

#18-222

SDG:

L1039720

DATE/TIME:

11/09/18 10:45

PAGE:

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Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

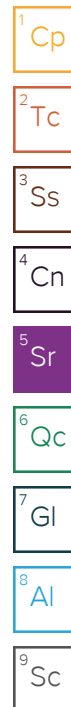
Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	213		14.4	43.4	10	11/06/2018 21:44	WG1192533
Residual Range Organics (RRO)	1130		36.1	108	10	11/06/2018 21:44	WG1192533
(S) o-Terphenyl	76.7			18.0-148		11/06/2018 21:44	WG1192533

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00380	0.0184	1	11/06/2018 11:39	WG1191392
PCB 1221	U		0.00582	0.0184	1	11/06/2018 11:39	WG1191392
PCB 1232	U		0.00452	0.0184	1	11/06/2018 11:39	WG1191392
PCB 1242	U		0.00345	0.0184	1	11/06/2018 11:39	WG1191392
PCB 1248	U		0.00342	0.0184	1	11/06/2018 11:39	WG1191392
PCB 1254	U		0.00512	0.0184	1	11/06/2018 11:39	WG1191392
PCB 1260	0.633		0.00536	0.0184	1	11/06/2018 11:39	WG1191392
(S) Decachlorobiphenyl	66.3			10.0-135		11/06/2018 11:39	WG1191392
(S) Tetrachloro-m-xylene	71.3			10.0-139		11/06/2018 11:39	WG1191392

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0696	0.361	10	11/06/2018 16:52	WG1191567
Acenaphthylene	U		0.0728	0.361	10	11/06/2018 16:52	WG1191567
Anthracene	U		0.0685	0.361	10	11/06/2018 16:52	WG1191567
Benzo(a)anthracene	U		0.0464	0.361	10	11/06/2018 16:52	WG1191567
Benzo(b)fluoranthene	U		0.0754	0.361	10	11/06/2018 16:52	WG1191567
Benzo(k)fluoranthene	U		0.0631	0.361	10	11/06/2018 16:52	WG1191567
Benzo(g,h,i)perylene	U		0.0782	0.361	10	11/06/2018 16:52	WG1191567
Benzo(a)pyrene	U		0.0594	0.361	10	11/06/2018 16:52	WG1191567
Bis(2-chlorethoxy)methane	U		0.0835	3.61	10	11/06/2018 16:52	WG1191567
Bis(2-chloroethyl)ether	U		0.0972	3.61	10	11/06/2018 16:52	WG1191567
Bis(2-chloroisopropyl)ether	U		0.0824	3.61	10	11/06/2018 16:52	WG1191567
4-Bromophenyl-phenylether	U		0.124	3.61	10	11/06/2018 16:52	WG1191567
2-Chloronaphthalene	U		0.0693	0.361	10	11/06/2018 16:52	WG1191567
4-Chlorophenyl-phenylether	U		0.0680	3.61	10	11/06/2018 16:52	WG1191567
Chrysene	U		0.0602	0.361	10	11/06/2018 16:52	WG1191567
Dibenz(a,h)anthracene	U		0.0890	0.361	10	11/06/2018 16:52	WG1191567
3,3-Dichlorobenzidine	U		0.861	3.61	10	11/06/2018 16:52	WG1191567
2,4-Dinitrotoluene	U		0.0658	3.61	10	11/06/2018 16:52	WG1191567
2,6-Dinitrotoluene	U		0.0799	3.61	10	11/06/2018 16:52	WG1191567
Fluoranthene	U		0.0538	0.361	10	11/06/2018 16:52	WG1191567
Fluorene	U		0.0740	0.361	10	11/06/2018 16:52	WG1191567
Hexachlorobenzene	U		0.0928	3.61	10	11/06/2018 16:52	WG1191567
Hexachloro-1,3-butadiene	U		0.108	3.61	10	11/06/2018 16:52	WG1191567
Hexachlorocyclopentadiene	U		0.637	3.61	10	11/06/2018 16:52	WG1191567
Hexachloroethane	U		0.145	3.61	10	11/06/2018 16:52	WG1191567
Indeno(1,2,3-cd)pyrene	U		0.0837	0.361	10	11/06/2018 16:52	WG1191567
Isophorone	U		0.0566	3.61	10	11/06/2018 16:52	WG1191567
Naphthalene	U		0.0964	0.361	10	11/06/2018 16:52	WG1191567
Nitrobenzene	U		0.0754	3.61	10	11/06/2018 16:52	WG1191567
n-Nitrosodimethylamine	U		0.702	3.61	10	11/06/2018 16:52	WG1191567
n-Nitrosodiphenylamine	U		0.976	3.61	10	11/06/2018 16:52	WG1191567
n-Nitrosodi-n-propylamine	U		0.0983	3.61	10	11/06/2018 16:52	WG1191567
Phenanthrene	U		0.0573	0.361	10	11/06/2018 16:52	WG1191567
Benzylbutyl phthalate	U		0.112	3.61	10	11/06/2018 16:52	WG1191567
Bis(2-ethylhexyl)phthalate	U		0.130	3.61	10	11/06/2018 16:52	WG1191567





Collected date/time: 10/29/18 00:00

L1039720

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Di-n-butyl phthalate	U		0.118	3.61	10	11/06/2018 16:52	WG1191567
Diethyl phthalate	U		0.0749	3.61	10	11/06/2018 16:52	WG1191567
Dimethyl phthalate	U		0.0586	3.61	10	11/06/2018 16:52	WG1191567
Di-n-octyl phthalate	U		0.0984	3.61	10	11/06/2018 16:52	WG1191567
Pyrene	U		0.133	0.361	10	11/06/2018 16:52	WG1191567
1,2,4-Trichlorobenzene	U		0.0950	3.61	10	11/06/2018 16:52	WG1191567
4-Chloro-3-methylphenol	U		0.0517	3.61	10	11/06/2018 16:52	WG1191567
2-Chlorophenol	U		0.0901	3.61	10	11/06/2018 16:52	WG1191567
2,4-Dichlorophenol	U		0.0809	3.61	10	11/06/2018 16:52	WG1191567
2,4-Dimethylphenol	U		0.511	3.61	10	11/06/2018 16:52	WG1191567
4,6-Dinitro-2-methylphenol	U		1.34	3.61	10	11/06/2018 16:52	WG1191567
2,4-Dinitrophenol	U		1.06	3.61	10	11/06/2018 16:52	WG1191567
2-Nitrophenol	U		0.141	3.61	10	11/06/2018 16:52	WG1191567
4-Nitrophenol	U	JO	0.569	3.61	10	11/06/2018 16:52	WG1191567
Pentachlorophenol	U		0.521	3.61	10	11/06/2018 16:52	WG1191567
Phenol	U		0.0754	3.61	10	11/06/2018 16:52	WG1191567
2,4,6-Trichlorophenol	U		0.0845	3.61	10	11/06/2018 16:52	WG1191567
(S) 2-Fluorophenol	62.4			12.0-120		11/06/2018 16:52	WG1191567
(S) Phenol-d5	57.9			10.0-120		11/06/2018 16:52	WG1191567
(S) Nitrobenzene-d5	57.5			10.0-122		11/06/2018 16:52	WG1191567
(S) 2-Fluorobiphenyl	54.8			15.0-120		11/06/2018 16:52	WG1191567
(S) 2,4,6-Tribromophenol	52.9			10.0-127		11/06/2018 16:52	WG1191567
(S) p-Terphenyl-d14	61.8			10.0-120		11/06/2018 16:52	WG1191567

¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

Sample Narrative:

L1039720-10 WG1191567: Dilution due to matrix



Calculated Results

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	185		0.155	1.10	1	11/08/2018 13:39	WG1189927

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.6		1	11/05/2018 14:13	WG1190828

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	U		0.707	2.21	1	11/08/2018 13:39	WG1193182

Mercury by Method 7471B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.00724	<u>J</u>	0.00309	0.0221	1	11/01/2018 16:49	WG1189729

Metals (ICP) by Method 6010D

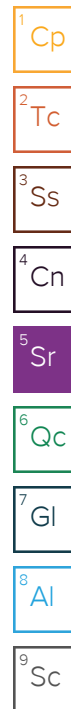
Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	0.938	<u>J</u>	0.508	2.21	1	11/04/2018 13:43	WG1189927
Barium	49.5		0.188	0.552	1	11/04/2018 13:43	WG1189927
Cadmium	U		0.0773	0.552	1	11/04/2018 13:43	WG1189927
Chromium	185		0.155	1.10	1	11/04/2018 13:43	WG1189927
Lead	21.4		0.210	0.552	1	11/04/2018 13:43	WG1189927
Selenium	U		0.684	2.21	1	11/04/2018 13:43	WG1189927
Silver	U		0.132	1.10	1	11/04/2018 13:43	WG1189927

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	1.55	<u>B J</u>	0.936	2.76	25	11/05/2018 15:43	WG1191444
(S) a,a,a-Trifluorotoluene(FID)	97.9			77.0-120		11/05/2018 15:43	WG1191444

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	0.0240	<u>J</u>	0.0151	0.0276	1	11/07/2018 08:23	WG1192418
Acrylonitrile	U		0.00210	0.0138	1	11/04/2018 11:29	WG1190959
Benzene	0.00215		0.000442	0.00110	1	11/04/2018 11:29	WG1190959
Bromobenzene	U		0.00116	0.0138	1	11/04/2018 11:29	WG1190959
Bromodichloromethane	U		0.000870	0.00276	1	11/07/2018 08:23	WG1192418
Bromoform	U		0.00660	0.0276	1	11/04/2018 11:29	WG1190959
Bromomethane	U	<u>J3</u>	0.00408	0.0138	1	11/04/2018 11:29	WG1190959
n-Butylbenzene	U		0.00424	0.0138	1	11/04/2018 11:29	WG1190959
sec-Butylbenzene	U		0.00279	0.0138	1	11/04/2018 11:29	WG1190959
tert-Butylbenzene	U		0.00171	0.00552	1	11/04/2018 11:29	WG1190959
Carbon tetrachloride	U		0.00119	0.00552	1	11/04/2018 11:29	WG1190959
Chlorobenzene	U		0.000633	0.00276	1	11/04/2018 11:29	WG1190959
Chlorodibromomethane	U		0.000497	0.00276	1	11/04/2018 11:29	WG1190959
Chloroethane	U		0.00119	0.00552	1	11/04/2018 11:29	WG1190959
Chloroform	U		0.000458	0.00276	1	11/04/2018 11:29	WG1190959
Chloromethane	U		0.00153	0.0138	1	11/04/2018 11:29	WG1190959





Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Chlorotoluene	U		0.00102	0.00276	1	11/04/2018 11:29	WG1190959
4-Chlorotoluene	U		0.00125	0.00552	1	11/04/2018 11:29	WG1190959
1,2-Dibromo-3-Chloropropane	U		0.00563	0.0276	1	11/04/2018 11:29	WG1190959
1,2-Dibromoethane	U		0.000580	0.00276	1	11/04/2018 11:29	WG1190959
Dibromomethane	U		0.00110	0.00552	1	11/04/2018 11:29	WG1190959
1,2-Dichlorobenzene	U		0.00160	0.00552	1	11/04/2018 11:29	WG1190959
1,3-Dichlorobenzene	U		0.00188	0.00552	1	11/07/2018 08:23	WG1192418
1,4-Dichlorobenzene	U		0.00217	0.00552	1	11/04/2018 11:29	WG1190959
Dichlorodifluoromethane	U		0.000903	0.00276	1	11/04/2018 11:29	WG1190959
1,1-Dichloroethane	U		0.000635	0.00276	1	11/04/2018 11:29	WG1190959
1,2-Dichloroethane	U		0.000524	0.00276	1	11/04/2018 11:29	WG1190959
1,1-Dichloroethene	U		0.000552	0.00276	1	11/04/2018 11:29	WG1190959
cis-1,2-Dichloroethene	U		0.000762	0.00276	1	11/04/2018 11:29	WG1190959
trans-1,2-Dichloroethene	U		0.00158	0.00552	1	11/04/2018 11:29	WG1190959
1,2-Dichloropropane	U		0.00140	0.00552	1	11/07/2018 08:23	WG1192418
1,1-Dichloropropene	U		0.000773	0.00276	1	11/04/2018 11:29	WG1190959
1,3-Dichloropropane	U		0.00193	0.00552	1	11/04/2018 11:29	WG1190959
cis-1,3-Dichloropropene	U		0.000749	0.00276	1	11/04/2018 11:29	WG1190959
trans-1,3-Dichloropropene	U		0.00169	0.00552	1	11/04/2018 11:29	WG1190959
2,2-Dichloropropane	U		0.000875	0.00276	1	11/04/2018 11:29	WG1190959
Di-isopropyl ether	U		0.000386	0.00110	1	11/04/2018 11:29	WG1190959
Ethylbenzene	U		0.000585	0.00276	1	11/04/2018 11:29	WG1190959
Hexachloro-1,3-butadiene	U		0.0140	0.0276	1	11/04/2018 11:29	WG1190959
Isopropylbenzene	U		0.000953	0.00276	1	11/04/2018 11:29	WG1190959
p-Isopropyltoluene	U		0.00257	0.00552	1	11/04/2018 11:29	WG1190959
2-Butanone (MEK)	U	J3	0.0138	0.0276	1	11/04/2018 11:29	WG1190959
Methylene Chloride	U		0.00733	0.0276	1	11/04/2018 11:29	WG1190959
4-Methyl-2-pentanone (MIBK)	U		0.0110	0.0276	1	11/04/2018 11:29	WG1190959
Methyl tert-butyl ether	U		0.000326	0.00110	1	11/04/2018 11:29	WG1190959
Naphthalene	0.0137	1L	0.00344	0.0138	1	11/04/2018 11:29	WG1190959
n-Propylbenzene	U		0.00130	0.00552	1	11/04/2018 11:29	WG1190959
Styrene	U		0.00301	0.0138	1	11/04/2018 11:29	WG1190959
1,1,1,2-Tetrachloroethane	U		0.000552	0.00276	1	11/04/2018 11:29	WG1190959
1,1,2,2-Tetrachloroethane	U		0.000431	0.00276	1	11/04/2018 11:29	WG1190959
1,1,2-Trichlorotrifluoroethane	U		0.000745	0.00276	1	11/04/2018 11:29	WG1190959
Tetrachloroethene	0.00914		0.000773	0.00276	1	11/04/2018 11:29	WG1190959
Toluene	0.00519	1L	0.00138	0.00552	1	11/04/2018 11:29	WG1190959
1,2,3-Trichlorobenzene	U		0.000690	0.00276	1	11/04/2018 11:29	WG1190959
1,2,4-Trichlorobenzene	U		0.00532	0.0138	1	11/04/2018 11:29	WG1190959
1,1,1-Trichloroethane	U		0.000304	0.00276	1	11/04/2018 11:29	WG1190959
1,1,2-Trichloroethane	U		0.000975	0.00276	1	11/04/2018 11:29	WG1190959
Trichloroethene	U		0.000442	0.00110	1	11/07/2018 08:23	WG1192418
Trichlorofluoromethane	U		0.000552	0.00276	1	11/04/2018 11:29	WG1190959
1,2,3-Trichloropropane	U		0.00563	0.0138	1	11/04/2018 11:29	WG1190959
1,2,4-Trimethylbenzene	0.00352	1L	0.00128	0.00552	1	11/04/2018 11:29	WG1190959
1,2,3-Trimethylbenzene	0.00186	1L	0.00127	0.00552	1	11/04/2018 11:29	WG1190959
Vinyl chloride	U		0.000754	0.00276	1	11/04/2018 11:29	WG1190959
1,3,5-Trimethylbenzene	0.00163	1L	0.00119	0.00552	1	11/04/2018 11:29	WG1190959
Xylenes, Total	U		0.00528	0.00718	1	11/04/2018 11:29	WG1190959
(S) Toluene-d8	112			75.0-131		11/04/2018 11:29	WG1190959
(S) Toluene-d8	99.6			75.0-131		11/07/2018 08:23	WG1192418
(S) Dibromofluoromethane	95.7			65.0-129		11/04/2018 11:29	WG1190959
(S) Dibromofluoromethane	89.8			65.0-129		11/07/2018 08:23	WG1192418
(S) 4-Bromofluorobenzene	113			67.0-138		11/04/2018 11:29	WG1190959
(S) 4-Bromofluorobenzene	98.1			67.0-138		11/07/2018 08:23	WG1192418

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

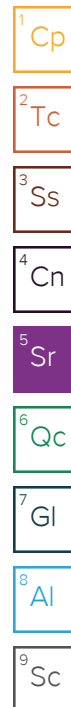
Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	119		14.7	44.2	10	11/06/2018 20:13	WG1192533
Residual Range Organics (RRO)	620		36.8	110	10	11/06/2018 20:13	WG1192533
(S) o-Terphenyl	59.6			18.0-148		11/06/2018 20:13	WG1192533

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00386	0.0188	1	11/06/2018 11:53	WG1191392
PCB 1221	U		0.00593	0.0188	1	11/06/2018 11:53	WG1191392
PCB 1232	U		0.00460	0.0188	1	11/06/2018 11:53	WG1191392
PCB 1242	U		0.00351	0.0188	1	11/06/2018 11:53	WG1191392
PCB 1248	U		0.00348	0.0188	1	11/06/2018 11:53	WG1191392
PCB 1254	U		0.00521	0.0188	1	11/06/2018 11:53	WG1191392
PCB 1260	0.0276		0.00545	0.0188	1	11/06/2018 11:53	WG1191392
(S) Decachlorobiphenyl	63.4			10.0-135		11/06/2018 11:53	WG1191392
(S) Tetrachloro-m-xylene	66.7			10.0-139		11/06/2018 11:53	WG1191392

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0709	0.368	10	11/06/2018 17:15	WG1191567
Acenaphthylene	U		0.0741	0.368	10	11/06/2018 17:15	WG1191567
Anthracene	U		0.0698	0.368	10	11/06/2018 17:15	WG1191567
Benzo(a)anthracene	U		0.0473	0.368	10	11/06/2018 17:15	WG1191567
Benzo(b)fluoranthene	U		0.0767	0.368	10	11/06/2018 17:15	WG1191567
Benzo(k)fluoranthene	U		0.0643	0.368	10	11/06/2018 17:15	WG1191567
Benzo(g,h,i)perylene	U		0.0796	0.368	10	11/06/2018 17:15	WG1191567
Benzo(a)pyrene	U		0.0605	0.368	10	11/06/2018 17:15	WG1191567
Bis(2-chlorethoxy)methane	U		0.0850	3.68	10	11/06/2018 17:15	WG1191567
Bis(2-chloroethyl)ether	U		0.0989	3.68	10	11/06/2018 17:15	WG1191567
Bis(2-chloroisopropyl)ether	U		0.0839	3.68	10	11/06/2018 17:15	WG1191567
4-Bromophenyl-phenylether	U		0.126	3.68	10	11/06/2018 17:15	WG1191567
2-Chloronaphthalene	U		0.0705	0.368	10	11/06/2018 17:15	WG1191567
4-Chlorophenyl-phenylether	U		0.0692	3.68	10	11/06/2018 17:15	WG1191567
Chrysene	U		0.0613	0.368	10	11/06/2018 17:15	WG1191567
Dibenz(a,h)anthracene	U		0.0906	0.368	10	11/06/2018 17:15	WG1191567
3,3-Dichlorobenzidine	U		0.877	3.68	10	11/06/2018 17:15	WG1191567
2,4-Dinitrotoluene	U		0.0670	3.68	10	11/06/2018 17:15	WG1191567
2,6-Dinitrotoluene	U		0.0814	3.68	10	11/06/2018 17:15	WG1191567
Fluoranthene	U		0.0548	0.368	10	11/06/2018 17:15	WG1191567
Fluorene	U		0.0753	0.368	10	11/06/2018 17:15	WG1191567
Hexachlorobenzene	U		0.0945	3.68	10	11/06/2018 17:15	WG1191567
Hexachloro-1,3-butadiene	U		0.110	3.68	10	11/06/2018 17:15	WG1191567
Hexachlorocyclopentadiene	U		0.648	3.68	10	11/06/2018 17:15	WG1191567
Hexachloroethane	U		0.148	3.68	10	11/06/2018 17:15	WG1191567
Indeno(1,2,3-cd)pyrene	U		0.0852	0.368	10	11/06/2018 17:15	WG1191567
Isophorone	U		0.0576	3.68	10	11/06/2018 17:15	WG1191567
Naphthalene	U		0.0981	0.368	10	11/06/2018 17:15	WG1191567
Nitrobenzene	U		0.0767	3.68	10	11/06/2018 17:15	WG1191567
n-Nitrosodimethylamine	U		0.714	3.68	10	11/06/2018 17:15	WG1191567
n-Nitrosodiphenylamine	U		0.994	3.68	10	11/06/2018 17:15	WG1191567
n-Nitrosodi-n-propylamine	U		0.100	3.68	10	11/06/2018 17:15	WG1191567
Phenanthrene	U		0.0583	0.368	10	11/06/2018 17:15	WG1191567
Benzylbutyl phthalate	U		0.114	3.68	10	11/06/2018 17:15	WG1191567
Bis(2-ethylhexyl)phthalate	0.859	U	0.132	3.68	10	11/06/2018 17:15	WG1191567





Collected date/time: 10/29/18 12:15

L1039720

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Di-n-butyl phthalate	U		0.120	3.68	10	11/06/2018 17:15	WG1191567
Diethyl phthalate	U		0.0763	3.68	10	11/06/2018 17:15	WG1191567
Dimethyl phthalate	U		0.0596	3.68	10	11/06/2018 17:15	WG1191567
Di-n-octyl phthalate	U		0.100	3.68	10	11/06/2018 17:15	WG1191567
Pyrene	U		0.136	0.368	10	11/06/2018 17:15	WG1191567
1,2,4-Trichlorobenzene	U		0.0967	3.68	10	11/06/2018 17:15	WG1191567
4-Chloro-3-methylphenol	U		0.0527	3.68	10	11/06/2018 17:15	WG1191567
2-Chlorophenol	U		0.0917	3.68	10	11/06/2018 17:15	WG1191567
2,4-Dichlorophenol	U		0.0824	3.68	10	11/06/2018 17:15	WG1191567
2,4-Dimethylphenol	U		0.520	3.68	10	11/06/2018 17:15	WG1191567
4,6-Dinitro-2-methylphenol	U		1.37	3.68	10	11/06/2018 17:15	WG1191567
2,4-Dinitrophenol	U		1.08	3.68	10	11/06/2018 17:15	WG1191567
2-Nitrophenol	U		0.144	3.68	10	11/06/2018 17:15	WG1191567
4-Nitrophenol	U	JO	0.580	3.68	10	11/06/2018 17:15	WG1191567
Pentachlorophenol	U		0.530	3.68	10	11/06/2018 17:15	WG1191567
Phenol	0.549	J	0.0767	3.68	10	11/06/2018 17:15	WG1191567
2,4,6-Trichlorophenol	U		0.0860	3.68	10	11/06/2018 17:15	WG1191567
(S) 2-Fluorophenol	89.1			12.0-120		11/06/2018 17:15	WG1191567
(S) Phenol-d5	84.1			10.0-120		11/06/2018 17:15	WG1191567
(S) Nitrobenzene-d5	77.9			10.0-122		11/06/2018 17:15	WG1191567
(S) 2-Fluorobiphenyl	78.9			15.0-120		11/06/2018 17:15	WG1191567
(S) 2,4,6-Tribromophenol	79.5			10.0-127		11/06/2018 17:15	WG1191567
(S) p-Terphenyl-d14	79.5			10.0-120		11/06/2018 17:15	WG1191567

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Sample Narrative:

L1039720-11 WG1191567: Dilution due to matrix



Total Solids by Method 2540 G-2011

L1039720-01,02,03,04

Method Blank (MB)

(MB) R3357206-1 11/05/18 13:57

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.000			

L1039718-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1039718-01 11/05/18 13:57 • (DUP) R3357206-3 11/05/18 13:57

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	94.4	94.0	1	0.414		10

Laboratory Control Sample (LCS)

(LCS) R3357206-2 11/05/18 13:57

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Total Solids	50.0	50.0	100	85.0-115	

¹Cp ${}^2\text{Tc}$ 3S_S ${}^4\text{Cn}$ ^5Sr ${}^6\text{Qc}$

GI

 ${}^8\text{Al}$ ⁹Sc

Method Blank (MB)

(MB) R3357213-1 11/05/18 14:13

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.000			

L1039723-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1039723-03 11/05/18 14:13 • (DUP) R3357213-3 11/05/18 14:13

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	90.5	88.3	1	2.47		10

Laboratory Control Sample (LCS)

(LCS) R3357213-2 11/05/18 14:13

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3358174-1 11/08/18 13:33				
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chromium,Hexavalent	U		0.640	2.00

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L1041443-22 Original Sample (OS) • Duplicate (DUP)

(OS) L1041443-22 11/08/18 13:44 • (DUP) R3358174-3 11/08/18 13:44						
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chromium,Hexavalent	ND	0.680	1	6.06	J	20

L1041443-26 Original Sample (OS) • Duplicate (DUP)

(OS) L1041443-26 11/08/18 13:46 • (DUP) R3358174-4 11/08/18 13:47						
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chromium,Hexavalent	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3358174-2 11/08/18 13:34					
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chromium,Hexavalent	24.0	23.0	96.0	80.0-120	

L1041443-30 Original Sample (OS) • Matrix Spike (MS)

(OS) L1041443-30 11/08/18 13:48 • (MS) R3358174-10 11/08/18 13:49							
	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Chromium,Hexavalent	643	ND	18.0	2.80	1	75.0-125	J6

L1041443-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1041443-30 11/08/18 13:48 • (MS) R3358174-7 11/08/18 13:49 • (MSD) R3358174-9 11/08/18 13:49												
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chromium,Hexavalent	20.0	ND	21.6	22.5	108	112	1	75.0-125			3.81	20



Method Blank (MB)

(MB) R3356154-1 11/01/18 15:53

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Mercury	U		0.00280	0.0200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3356154-2 11/01/18 15:55 • (LCSD) R3356154-3 11/01/18 16:06

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Mercury	0.300	0.250	0.249	83.2	83.0	80.0-120			0.276	20

L1039607-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1039607-02 11/01/18 16:08 • (MS) R3356154-4 11/01/18 16:11 • (MSD) R3356154-5 11/01/18 16:13

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Mercury	0.300	ND	0.0664	0.124	22.1	41.2	1	75.0-125	J6	J3 J6	60.2	20



Method Blank (MB)

(MB) R3356762-1 11/04/18 13:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.460	2.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	U		0.140	1.00
Lead	U		0.190	0.500
Selenium	U		0.620	2.00
Silver	U		0.120	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3356762-2 11/04/18 13:11 • (LCSD) R3356762-3 11/04/18 13:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	96.2	97.8	96.2	97.8	80.0-120			1.70	20
Barium	100	99.2	100	99.2	100	80.0-120			1.26	20
Cadmium	100	95.3	96.4	95.3	96.4	80.0-120			1.17	20
Chromium	100	91.1	91.8	91.1	91.8	80.0-120			0.691	20
Lead	100	93.6	93.9	93.6	93.9	80.0-120			0.315	20
Selenium	100	95.1	96.0	95.1	96.0	80.0-120			0.972	20
Silver	20.0	17.0	17.1	84.9	85.6	80.0-120			0.823	20

L1039720-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1039720-07 11/04/18 13:16 • (MS) R3356762-6 11/04/18 13:24 • (MSD) R3356762-7 11/04/18 13:26

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	114	0.641	116	113	102	98.9	1	75.0-125			2.71	20
Barium	114	231	311	315	70.3	73.7	1	75.0-125	J6	J6	1.24	20
Cadmium	114	U	117	115	103	101	1	75.0-125			2.03	20
Chromium	114	13.5	116	117	89.9	90.9	1	75.0-125			0.978	20
Lead	114	5.69	128	127	108	107	1	75.0-125			0.607	20
Selenium	114	U	114	110	100	96.2	1	75.0-125			3.93	20
Silver	22.8	U	19.8	19.2	86.9	84.4	1	75.0-125			2.96	20



Method Blank (MB)

(MB) R3357315-3 11/05/18 11:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C6 - C12	0.0553	⬇	0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	98.3			77.0-120

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357315-1 11/05/18 10:21 • (LCSD) R3357315-2 11/05/18 10:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHG C6 - C12	5.50	6.36	6.37	116	116	71.0-124			0.240	20
(S) a,a,a-Trifluorotoluene(FID)				104	103	77.0-120				

L1040171-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1040171-06 11/05/18 17:56 • (MS) R3357315-4 11/05/18 19:47 • (MSD) R3357315-5 11/05/18 20:09

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPHG C6 - C12	5.50	2.00	151	150	97.8	97.0	27.75	10.0-149			0.770	27
(S) a,a,a-Trifluorotoluene(FID)					103	103		77.0-120				

[L1039720-01,02,03,04,07,08,10,11](#)

Method Blank (MB)

(MB) R3357527-3 11/03/18 22:04

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
Bromoform	U		0.00598	0.0250
Bromomethane	U		0.00370	0.0125
n-Butylbenzene	U		0.00384	0.0125
sec-Butylbenzene	U		0.00253	0.0125
tert-Butylbenzene	U		0.00155	0.00500
Carbon tetrachloride	U		0.00108	0.00500
Chlorobenzene	U		0.000573	0.00250
Chlorodibromomethane	U		0.000450	0.00250
Chloroethane	U		0.00108	0.00500
Chloroform	U		0.000415	0.00250
Chloromethane	U		0.00139	0.0125
2-Chlorotoluene	U		0.000920	0.00250
4-Chlorotoluene	U		0.00113	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00510	0.0250
1,2-Dibromoethane	U		0.000525	0.00250
Dibromomethane	U		0.00100	0.00500
1,2-Dichlorobenzene	U		0.00145	0.00500
1,4-Dichlorobenzene	U		0.00197	0.00500
Dichlorodifluoromethane	U		0.000818	0.00250
1,1-Dichloroethane	U		0.000575	0.00250
1,2-Dichloroethane	U		0.000475	0.00250
1,1-Dichloroethene	U		0.000500	0.00250
cis-1,2-Dichloroethene	U		0.000690	0.00250
trans-1,2-Dichloroethene	U		0.00143	0.00500
1,1-Dichloropropene	U		0.000700	0.00250
1,3-Dichloropropane	U		0.00175	0.00500
cis-1,3-Dichloropropene	U		0.000678	0.00250
trans-1,3-Dichloropropene	U		0.00153	0.00500
2,2-Dichloropropane	U		0.000793	0.00250
Di-isopropyl ether	U		0.000350	0.00100
Ethylbenzene	U		0.000530	0.00250
Hexachloro-1,3-butadiene	U		0.0127	0.0250
Isopropylbenzene	U		0.000863	0.00250
p-Isopropyltoluene	U		0.00233	0.00500
2-Butanone (MEK)	U		0.0125	0.0250
Methylene Chloride	0.00866	U	0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.0100	0.0250

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3357527-3 11/03/18 22:04

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Methyl tert-butyl ether	U		0.000295	0.00100
Naphthalene	U		0.00312	0.0125
n-Propylbenzene	U		0.00118	0.00500
Styrene	U		0.00273	0.0125
1,1,1,2-Tetrachloroethane	U		0.000500	0.00250
1,1,2,2-Tetrachloroethane	U		0.000390	0.00250
Tetrachloroethene	U		0.000700	0.00250
Toluene	U		0.00125	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000675	0.00250
1,2,3-Trichlorobenzene	U		0.000625	0.00250
1,2,4-Trichlorobenzene	U		0.00482	0.0125
1,1,1-Trichloroethane	U		0.000275	0.00250
1,1,2-Trichloroethane	U		0.000883	0.00250
Trichlorofluoromethane	U		0.000500	0.00250
1,2,3-Trichloropropane	U		0.00510	0.0125
1,2,3-Trimethylbenzene	U		0.00115	0.00500
1,2,4-Trimethylbenzene	U		0.00116	0.00500
1,3,5-Trimethylbenzene	U		0.00108	0.00500
Vinyl chloride	U		0.000683	0.00250
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	114			75.0-131
(S) Dibromofluoromethane	102			65.0-129
(S) 4-Bromofluorobenzene	111			67.0-138

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357527-1 11/03/18 20:29 • (LCSD) R3357527-2 11/03/18 20:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acrylonitrile	0.625	0.531	0.474	84.9	75.9	45.0-153			11.2	22
Benzene	0.125	0.118	0.107	94.3	85.3	70.0-123			9.98	20
Bromobenzene	0.125	0.119	0.126	95.6	101	73.0-121			5.55	20
Bromoform	0.125	0.111	0.126	88.5	101	64.0-132			13.1	20
Bromomethane	0.125	0.118	0.0954	94.5	76.3	56.0-147		J3	21.3	20
n-Butylbenzene	0.125	0.116	0.110	92.5	88.0	68.0-135			4.98	20
sec-Butylbenzene	0.125	0.112	0.114	89.9	91.1	74.0-130			1.39	20
tert-Butylbenzene	0.125	0.111	0.114	88.5	91.5	75.0-127			3.40	20
Carbon tetrachloride	0.125	0.111	0.101	89.0	80.7	66.0-128			9.73	20
Chlorobenzene	0.125	0.121	0.117	96.9	93.4	76.0-128			3.74	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357527-1 11/03/18 20:29 • (LCSD) R3357527-2 11/03/18 20:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chlorodibromomethane	0.125	0.119	0.113	95.3	90.7	74.0-127			4.88	20
Chloroethane	0.125	0.105	0.0909	84.0	72.7	61.0-134			14.3	20
Chloroform	0.125	0.114	0.101	91.3	80.6	72.0-123			12.4	20
Chloromethane	0.125	0.125	0.150	99.8	120	51.0-138			18.1	20
2-Chlorotoluene	0.125	0.118	0.116	94.5	93.0	75.0-124			1.55	20
4-Chlorotoluene	0.125	0.102	0.106	81.5	84.9	75.0-124			4.00	20
1,2-Dibromo-3-Chloropropane	0.125	0.105	0.107	84.3	85.7	59.0-130			1.64	20
1,2-Dibromoethane	0.125	0.124	0.120	98.9	96.3	74.0-128			2.74	20
Dibromomethane	0.125	0.122	0.119	97.6	95.0	75.0-122			2.73	20
1,2-Dichlorobenzene	0.125	0.113	0.110	90.6	87.7	76.0-124			3.17	20
1,4-Dichlorobenzene	0.125	0.115	0.110	91.8	87.9	77.0-121			4.44	20
Dichlorodifluoromethane	0.125	0.183	0.159	146	127	43.0-156			14.0	20
1,1-Dichloroethane	0.125	0.112	0.0953	89.7	76.2	70.0-127			16.3	20
1,2-Dichloroethane	0.125	0.119	0.112	95.1	89.3	65.0-131			6.22	20
1,1-Dichloroethene	0.125	0.111	0.0961	89.1	76.9	65.0-131			14.7	20
cis-1,2-Dichloroethene	0.125	0.122	0.108	97.2	86.7	73.0-125			11.4	20
trans-1,2-Dichloroethene	0.125	0.108	0.0956	86.3	76.5	71.0-125			12.1	20
1,1-Dichloropropene	0.125	0.0978	0.0921	78.3	73.7	73.0-125			6.06	20
1,3-Dichloropropane	0.125	0.121	0.123	97.2	98.8	80.0-125			1.65	20
cis-1,3-Dichloropropene	0.125	0.111	0.114	88.9	91.0	76.0-127			2.37	20
trans-1,3-Dichloropropene	0.125	0.115	0.114	91.7	91.2	73.0-127			0.588	20
2,2-Dichloropropane	0.125	0.113	0.0986	90.8	78.9	59.0-135			14.1	20
Di-isopropyl ether	0.125	0.101	0.0923	80.8	73.8	60.0-136			9.01	20
Ethylbenzene	0.125	0.118	0.111	94.2	88.8	74.0-126			5.98	20
Hexachloro-1,3-butadiene	0.125	0.111	0.0985	88.5	78.8	57.0-150			11.6	20
Isopropylbenzene	0.125	0.111	0.119	88.9	94.8	72.0-127			6.48	20
p-Isopropyltoluene	0.125	0.109	0.108	87.4	86.1	72.0-133			1.49	20
2-Butanone (MEK)	0.625	0.711	0.555	114	88.8	30.0-160		J3	24.7	24
Methylene Chloride	0.125	0.116	0.100	93.2	80.1	68.0-123			15.0	20
4-Methyl-2-pentanone (MIBK)	0.625	0.614	0.588	98.2	94.1	56.0-143			4.35	20
Methyl tert-butyl ether	0.125	0.115	0.102	91.8	81.7	66.0-132			11.7	20
Naphthalene	0.125	0.0997	0.109	79.8	87.1	59.0-130			8.77	20
n-Propylbenzene	0.125	0.108	0.112	86.2	89.9	74.0-126			4.30	20
Styrene	0.125	0.113	0.125	90.4	100	72.0-127			10.2	20
1,1,1,2-Tetrachloroethane	0.125	0.126	0.109	101	86.9	74.0-129			14.7	20
1,1,2,2-Tetrachloroethane	0.125	0.108	0.117	86.6	93.4	68.0-128			7.62	20
Tetrachloroethene	0.125	0.125	0.113	100	90.4	70.0-136			9.99	20
Toluene	0.125	0.108	0.107	86.6	85.5	75.0-121			1.34	20
1,1,2-Trichlorotrifluoroethane	0.125	0.130	0.114	104	91.0	61.0-139			13.6	20
1,2,3-Trichlorobenzene	0.125	0.0984	0.105	78.7	84.1	59.0-139			6.62	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357527-1 11/03/18 20:29 • (LCSD) R3357527-2 11/03/18 20:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,2,4-Trichlorobenzene	0.125	0.107	0.0980	85.5	78.4	62.0-137			8.67	20
1,1,1-Trichloroethane	0.125	0.114	0.101	91.5	80.7	69.0-126			12.6	20
1,1,2-Trichloroethane	0.125	0.119	0.116	95.1	92.8	78.0-123			2.43	20
Trichlorofluoromethane	0.125	0.124	0.111	99.0	89.0	61.0-142			10.6	20
1,2,3-Trichloropropane	0.125	0.119	0.137	94.8	110	67.0-129			14.7	20
1,2,3-Trimethylbenzene	0.125	0.104	0.104	83.6	83.4	74.0-124			0.231	20
1,2,4-Trimethylbenzene	0.125	0.112	0.111	89.9	88.9	70.0-126			1.10	20
1,3,5-Trimethylbenzene	0.125	0.109	0.113	87.6	90.6	73.0-127			3.46	20
Vinyl chloride	0.125	0.120	0.105	95.8	84.3	63.0-134			12.8	20
Xylenes, Total	0.375	0.352	0.325	93.9	86.7	72.0-127			7.98	20
(S) Toluene-d8				113	113	75.0-131				
(S) Dibromofluoromethane				107	99.3	65.0-129				
(S) 4-Bromofluorobenzene				109	119	67.0-138				

L1040122-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1040122-11 11/04/18 15:14 • (MS) R3357527-4 11/04/18 15:52 • (MSD) R3357527-5 11/04/18 16:11

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acrylonitrile	0.736	ND	0.422	0.453	57.3	61.5	1	10.0-160			7.04	40
Benzene	0.147	ND	0.0933	0.0939	63.4	63.8	1	10.0-149			0.610	37
Bromobenzene	0.147	ND	0.115	0.116	78.3	79.1	1	10.0-156			1.06	38
Bromoform	0.147	ND	0.105	0.119	71.6	80.7	1	10.0-146			12.0	36
Bromomethane	0.147	ND	0.0666	0.0691	45.2	46.9	1	10.0-149			3.70	38
n-Butylbenzene	0.147	ND	0.117	0.114	79.7	77.5	1	10.0-160			2.77	40
sec-Butylbenzene	0.147	ND	0.114	0.112	77.7	76.4	1	10.0-159			1.69	39
tert-Butylbenzene	0.147	ND	0.112	0.114	75.7	77.4	1	10.0-156			2.17	39
Carbon tetrachloride	0.147	ND	0.0905	0.0949	61.5	64.5	1	10.0-145			4.76	37
Chlorobenzene	0.147	ND	0.105	0.110	71.6	74.9	1	10.0-152			4.52	39
Chlorodibromomethane	0.147	ND	0.106	0.113	72.1	76.6	1	10.0-146			6.05	37
Chloroethane	0.147	ND	0.0738	0.0894	50.1	60.7	1	10.0-146			19.1	40
Chloroform	0.147	ND	0.0977	0.0988	66.4	67.1	1	10.0-146			1.11	37
Chloromethane	0.147	ND	0.0622	0.0617	42.2	41.9	1	10.0-159			0.787	37
2-Chlorotoluene	0.147	ND	0.113	0.112	76.6	76.3	1	10.0-159			0.398	38
4-Chlorotoluene	0.147	ND	0.0979	0.102	66.5	69.4	1	10.0-155			4.32	39
1,2-Dibromo-3-Chloropropane	0.147	ND	0.0976	0.0991	66.3	67.3	1	10.0-151			1.57	39
1,2-Dibromoethane	0.147	ND	0.106	0.112	71.8	75.8	1	10.0-148			5.48	34
Dibromomethane	0.147	ND	0.0931	0.107	63.2	72.5	1	10.0-147			13.7	35
1,2-Dichlorobenzene	0.147	ND	0.113	0.114	77.0	77.6	1	10.0-155			0.843	37

L1040122-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1040122-11 11/04/18 15:14 • (MS) R3357527-4 11/04/18 15:52 • (MSD) R3357527-5 11/04/18 16:11

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,4-Dichlorobenzene	0.147	ND	0.110	0.109	75.0	74.1	1	10.0-151			1.23	38
Dichlorodifluoromethane	0.147	ND	0.0928	0.0897	63.0	60.9	1	10.0-160			3.42	35
1,1-Dichloroethane	0.147	ND	0.0919	0.0918	62.4	62.4	1	10.0-147			0.0846	37
1,2-Dichloroethane	0.147	ND	0.0885	0.0989	60.1	67.2	1	10.0-148			11.1	35
1,1-Dichloroethene	0.147	ND	0.0788	0.0779	53.5	52.9	1	10.0-155			1.22	37
cis-1,2-Dichloroethene	0.147	ND	0.0952	0.0992	64.6	67.4	1	10.0-149			4.12	37
trans-1,2-Dichloroethene	0.147	ND	0.0720	0.0751	48.9	51.0	1	10.0-150			4.21	37
1,1-Dichloropropene	0.147	ND	0.0746	0.0732	50.7	49.7	1	10.0-153			1.95	35
1,3-Dichloropropane	0.147	ND	0.109	0.116	74.1	78.6	1	10.0-154			5.81	35
cis-1,3-Dichloropropene	0.147	ND	0.0959	0.105	65.1	71.5	1	10.0-151			9.37	37
trans-1,3-Dichloropropene	0.147	ND	0.0972	0.108	66.0	73.7	1	10.0-148			11.0	37
2,2-Dichloropropane	0.147	ND	0.0742	0.0805	50.4	54.7	1	10.0-138			8.09	36
Di-isopropyl ether	0.147	ND	0.0820	0.0879	55.7	59.7	1	10.0-147			6.96	36
Ethylbenzene	0.147	ND	0.101	0.102	68.6	69.6	1	10.0-160			1.43	38
Hexachloro-1,3-butadiene	0.147	ND	0.121	0.112	82.0	76.0	1	10.0-160			7.58	40
Isopropylbenzene	0.147	ND	0.110	0.111	74.7	75.3	1	10.0-155			0.843	38
p-Isopropyltoluene	0.147	ND	0.113	0.108	76.8	73.4	1	10.0-160			4.49	40
2-Butanone (MEK)	0.736	ND	0.352	0.403	47.8	54.7	1	10.0-160			13.4	40
Methylene Chloride	0.147	ND	0.0862	0.0911	58.6	61.9	1	10.0-141			5.54	37
4-Methyl-2-pentanone (MIBK)	0.736	ND	0.464	0.521	63.1	70.7	1	10.0-160			11.5	35
Methyl tert-butyl ether	0.147	ND	0.0843	0.0981	57.2	66.6	1	11.0-147			15.2	35
Naphthalene	0.147	ND	0.122	0.130	83.1	88.6	1	10.0-160			6.40	36
n-Propylbenzene	0.147	ND	0.108	0.104	73.2	70.7	1	10.0-158			3.57	38
Styrene	0.147	ND	0.110	0.113	74.6	77.1	1	10.0-160			3.20	40
1,1,1,2-Tetrachloroethane	0.147	ND	0.109	0.115	74.3	78.2	1	10.0-149			5.07	39
1,1,2,2-Tetrachloroethane	0.147	ND	0.104	0.112	70.9	76.2	1	10.0-160			7.18	35
Tetrachloroethene	0.147	ND	0.0989	0.0958	67.2	65.1	1	10.0-156			3.18	39
Toluene	0.147	ND	0.0933	0.0969	63.3	65.8	1	10.0-156			3.79	38
1,1,2-Trichlorotrifluoroethane	0.147	ND	0.110	0.107	74.8	72.5	1	10.0-160			3.11	36
1,2,3-Trichlorobenzene	0.147	ND	0.132	0.147	90.0	99.7	1	10.0-160			10.3	40
1,2,4-Trichlorobenzene	0.147	ND	0.128	0.127	87.1	86.1	1	10.0-160			1.25	40
1,1,1-Trichloroethane	0.147	ND	0.0974	0.103	66.2	69.8	1	10.0-144			5.30	35
1,1,2-Trichloroethane	0.147	ND	0.104	0.115	70.5	77.8	1	10.0-160			9.86	35
Trichlorofluoromethane	0.147	ND	0.104	0.113	70.4	76.6	1	10.0-160			8.45	40
1,2,3-Trichloropropane	0.147	ND	0.107	0.116	72.6	78.8	1	10.0-156			8.26	35
1,2,3-Trimethylbenzene	0.147	ND	0.100	0.103	68.1	70.0	1	10.0-160			2.73	36
1,2,4-Trimethylbenzene	0.147	ND	0.108	0.108	73.5	73.2	1	10.0-160			0.345	36
1,3,5-Trimethylbenzene	0.147	ND	0.108	0.107	73.2	72.4	1	10.0-160			1.13	38
Vinyl chloride	0.147	ND	0.0714	0.0724	48.5	49.2	1	10.0-160			1.43	37

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



L1040122-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1040122-11 11/04/18 15:14 • (MS) R3357527-4 11/04/18 15:52 • (MSD) R3357527-5 11/04/18 16:11

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Xylenes, Total	0.442	ND	0.302	0.315	68.3	71.4	1	10.0-160			4.39	38
(S) Toluene-d8					113	113		75.0-131				
(S) Dibromofluoromethane					101	99.3		65.0-129				
(S) 4-Bromofluorobenzene					113	112		67.0-138				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3357708-3 11/06/18 22:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
Bromodichloromethane	U		0.000788	0.00250
1,3-Dichlorobenzene	U		0.00170	0.00500
1,2-Dichloropropane	U		0.00127	0.00500
Trichloroethene	U		0.000400	0.00100
(S) Toluene-d8	107			75.0-131
(S) Dibromofluoromethane	87.4			65.0-129
(S) 4-Bromofluorobenzene	99.0			67.0-138

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357708-1 11/06/18 21:28 • (LCSD) R3357708-2 11/06/18 21:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	0.524	0.551	83.9	88.2	10.0-160			5.04	31
Bromodichloromethane	0.125	0.113	0.109	90.5	87.2	73.0-121			3.73	20
1,3-Dichlorobenzene	0.125	0.117	0.114	93.3	90.9	76.0-125			2.60	20
1,2-Dichloropropane	0.125	0.118	0.117	94.2	93.6	74.0-125			0.649	20
Trichloroethene	0.125	0.122	0.120	97.6	96.3	76.0-126			1.32	20
(S) Toluene-d8				103	103	75.0-131				
(S) Dibromofluoromethane				95.7	93.3	65.0-129				
(S) 4-Bromofluorobenzene				98.4	98.2	67.0-138				



Method Blank (MB)

(MB) R3357820-3 11/07/18 09:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
1,2,3-Trichlorobenzene	U		0.000625	0.00250
(S) Toluene-d8	113			75.0-131
(S) Dibromofluoromethane	102			65.0-129
(S) 4-Bromofluorobenzene	111			67.0-138

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357820-1 11/07/18 08:32 • (LCSD) R3357820-2 11/07/18 08:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,2,3-Trichlorobenzene	0.125	0.116	0.115	92.5	92.2	59.0-139			0.275	20
(S) Toluene-d8				112	113	75.0-131				
(S) Dibromofluoromethane				109	104	65.0-129				
(S) 4-Bromofluorobenzene				116	116	67.0-138				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3357229-1 11/06/18 05:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	52.9			18.0-148

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357229-2 11/06/18 06:12 • (LCSD) R3357229-3 11/06/18 06:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	15.9	14.7	63.6	58.8	50.0-150			7.84	20
Residual Range Organics (RRO)	25.0	16.4	14.6	65.6	58.4	50.0-150			11.6	20
(S) o-Terphenyl				62.0	58.6	18.0-148				

L1040832-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1040832-02 11/06/18 06:46 • (MS) R3357229-4 11/06/18 07:02 • (MSD) R3357229-5 11/06/18 07:19

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	26.5	U	14.5	16.5	54.8	62.0	1	50.0-150			12.3	20
Residual Range Organics (RRO)	26.5	U	17.2	17.5	64.8	66.0	1	50.0-150			1.83	20
(S) o-Terphenyl					48.9	63.7		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3357661-1 11/07/18 09:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	57.4			18.0-148

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357661-2 11/07/18 09:50 • (LCSD) R3357661-3 11/07/18 10:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	18.9	16.5	75.6	66.0	50.0-150			13.6	20
Residual Range Organics (RRO)	25.0	14.5	13.1	58.0	52.4	50.0-150			10.1	20
(S) o-Terphenyl				68.2	61.3	18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3356721-1 11/04/18 05:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
PCB 1016	U		0.00350	0.0170
PCB 1221	U		0.00537	0.0170
PCB 1232	U		0.00417	0.0170
PCB 1242	U		0.00318	0.0170
PCB 1248	U		0.00315	0.0170
PCB 1254	U		0.00472	0.0170
PCB 1260	U		0.00494	0.0170
(S) Decachlorobiphenyl	64.1			10.0-135
(S) Tetrachloro-m-xylene	69.5			10.0-139

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3356721-2 11/04/18 05:39 • (LCSD) R3356721-3 11/04/18 05:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
PCB 1260	0.167	0.0766	0.109	45.9	65.3	37.0-145			34.9	37
PCB 1016	0.167	0.0776	0.109	46.5	65.3	36.0-141			33.7	35
(S) Decachlorobiphenyl				53.5	64.4	10.0-135				
(S) Tetrachloro-m-xylene				60.7	69.2	10.0-139				

L1039531-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1039531-02 11/04/18 06:07 • (MS) R3356721-4 11/04/18 06:21 • (MSD) R3356721-5 11/04/18 06:35

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1260	0.167	ND	0.0773	0.0873	46.3	52.3	1	10.0-160		P	12.2	38
PCB 1016	0.167	ND	0.0821	0.0951	49.2	56.9	1	10.0-160			14.7	37
(S) Decachlorobiphenyl					47.6	51.4		10.0-135				
(S) Tetrachloro-m-xylene					58.4	64.0		10.0-139				



Method Blank (MB)

(MB) R3357403-1 11/06/18 09:04

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
PCB 1016	U		0.00350	0.0170
PCB 1221	U		0.00537	0.0170
PCB 1232	U		0.00417	0.0170
PCB 1242	U		0.00318	0.0170
PCB 1248	U		0.00315	0.0170
PCB 1254	U		0.00472	0.0170
PCB 1260	U		0.00494	0.0170
(S) Decachlorobiphenyl	88.1			10.0-135
(S) Tetrachloro-m-xylene	84.2			10.0-139

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357403-2 11/06/18 09:18 • (LCSD) R3357403-3 11/06/18 09:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
PCB 1260	0.167	0.143	0.159	85.6	95.2	37.0-145			10.6	37
PCB 1016	0.167	0.134	0.142	80.2	85.0	36.0-141			5.80	35
(S) Decachlorobiphenyl				86.5	91.6	10.0-135				
(S) Tetrachloro-m-xylene				82.7	83.3	10.0-139				

L1039759-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1039759-03 11/06/18 13:07 • (MS) R3357403-4 11/06/18 13:21 • (MSD) R3357403-5 11/06/18 13:35

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1260	0.201	U	0.145	0.156	72.5	77.8	1	10.0-160			7.17	38
PCB 1016	0.201	U	0.139	0.150	69.5	74.9	1	10.0-160			7.47	37
(S) Decachlorobiphenyl					79.4	82.1		10.0-135				
(S) Tetrachloro-m-xylene					73.3	76.1		10.0-139				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3357179-3 11/05/18 21:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00642	0.0333
Acenaphthylene	U		0.00671	0.0333
Anthracene	U		0.00632	0.0333
Benzo(a)anthracene	U		0.00428	0.0333
Benzo(b)fluoranthene	U		0.00695	0.0333
Benzo(k)fluoranthene	U		0.00582	0.0333
Benzo(g,h,i)perylene	U		0.00721	0.0333
Benzo(a)pyrene	U		0.00548	0.0333
Bis(2-chlorethoxy)methane	U		0.00770	0.333
Bis(2-chloroethyl)ether	U		0.00896	0.333
Bis(2-chloroisopropyl)ether	U		0.00760	0.333
4-Bromophenyl-phenylether	U		0.0114	0.333
2-Chloronaphthalene	U		0.00639	0.0333
4-Chlorophenyl-phenylether	U		0.00627	0.333
Chrysene	U		0.00555	0.0333
Dibenz(a,h)anthracene	U		0.00821	0.0333
3,3-Dichlorobenzidine	U		0.0794	0.333
2,4-Dinitrotoluene	U		0.00607	0.333
2,6-Dinitrotoluene	U		0.00737	0.333
Fluoranthene	U		0.00496	0.0333
Fluorene	U		0.00682	0.0333
Hexachlorobenzene	U		0.00856	0.333
Hexachloro-1,3-butadiene	U		0.0100	0.333
Hexachlorocyclopentadiene	U		0.0587	0.333
Hexachloroethane	U		0.0134	0.333
Indeno(1,2,3-cd)pyrene	U		0.00772	0.0333
Isophorone	U		0.00522	0.333
Naphthalene	U		0.00889	0.0333
Nitrobenzene	U		0.00695	0.333
n-Nitrosodimethylamine	U		0.0647	0.333
n-Nitrosodiphenylamine	U		0.0900	0.333
n-Nitrosodi-n-propylamine	U		0.00906	0.333
Phenanthrene	U		0.00528	0.0333
Benzylbutyl phthalate	U		0.0103	0.333
Bis(2-ethylhexyl)phthalate	U		0.0120	0.333
Di-n-butyl phthalate	U		0.0109	0.333
Diethyl phthalate	U		0.00691	0.333
Dimethyl phthalate	U		0.00540	0.333
Di-n-octyl phthalate	U		0.00907	0.333
Pyrene	U		0.0123	0.0333

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3357179-3 11/05/18 21:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
1,2,4-Trichlorobenzene	U		0.00876	0.333
4-Chloro-3-methylphenol	U		0.00477	0.333
2-Chlorophenol	U		0.00831	0.333
2,4-Dichlorophenol	U		0.00746	0.333
2,4-Dimethylphenol	U		0.0471	0.333
4,6-Dinitro-2-methylphenol	U		0.124	0.333
2,4-Dinitrophenol	U		0.0980	0.333
2-Nitrophenol	U		0.0130	0.333
4-Nitrophenol	U		0.0525	0.333
Pentachlorophenol	U		0.0480	0.333
Phenol	U		0.00695	0.333
2,4,6-Trichlorophenol	U		0.00779	0.333
(S) Nitrobenzene-d5	108			10.0-122
(S) 2-Fluorobiphenyl	95.2			15.0-120
(S) p-Terphenyl-d14	113			10.0-120
(S) Phenol-d5	108			10.0-120
(S) 2-Fluorophenol	114			12.0-120
(S) 2,4,6-Tribromophenol	90.2			10.0-127

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357179-1 11/05/18 20:19 • (LCSD) R3357179-2 11/05/18 20:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.666	0.494	0.576	74.2	86.5	38.0-120			15.3	22
Acenaphthylene	0.666	0.499	0.579	74.9	86.9	40.0-120			14.8	22
Anthracene	0.666	0.520	0.631	78.1	94.7	42.0-120			19.3	20
Benzo(a)anthracene	0.666	0.539	0.652	80.9	97.9	44.0-120			19.0	20
Benzo(b)fluoranthene	0.666	0.564	0.736	84.7	111	43.0-120		J3	26.5	22
Benzo(k)fluoranthene	0.666	0.623	0.714	93.5	107	44.0-120			13.6	21
Benzo(g,h,i)perylene	0.666	0.561	0.693	84.2	104	43.0-120			21.1	22
Benzo(a)pyrene	0.666	0.587	0.722	88.1	108	45.0-120		J3	20.6	20
Bis(2-chlorethoxy)methane	0.666	0.510	0.550	76.6	82.6	20.0-120			7.55	23
Bis(2-chloroethyl)ether	0.666	0.528	0.561	79.3	84.2	16.0-120			6.06	31
Bis(2-chloroisopropyl)ether	0.666	0.443	0.473	66.5	71.0	23.0-120			6.55	30
4-Bromophenyl-phenylether	0.666	0.527	0.624	79.1	93.7	40.0-120			16.9	21
2-Chloronaphthalene	0.666	0.483	0.555	72.5	83.3	35.0-120			13.9	24
4-Chlorophenyl-phenylether	0.666	0.533	0.625	80.0	93.8	40.0-120			15.9	22
Chrysene	0.666	0.542	0.674	81.4	101	43.0-120		J3	21.7	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357179-1 11/05/18 20:19 • (LCSD) R3357179-2 11/05/18 20:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Dibenz(a,h)anthracene	0.666	0.569	0.708	85.4	106	44.0-120			21.8	22
3,3-Dichlorobenzidine	0.666	0.522	0.652	78.4	97.9	28.0-120			22.1	23
2,4-Dinitrotoluene	0.666	0.603	0.741	90.5	111	45.0-120			20.5	21
2,6-Dinitrotoluene	0.666	0.529	0.660	79.4	99.1	42.0-120		J3	22.0	21
Fluoranthene	0.666	0.524	0.646	78.7	97.0	44.0-120			20.9	21
Fluorene	0.666	0.522	0.615	78.4	92.3	41.0-120			16.4	22
Hexachlorobenzene	0.666	0.535	0.633	80.3	95.0	39.0-120			16.8	21
Hexachloro-1,3-butadiene	0.666	0.491	0.537	73.7	80.6	15.0-120			8.95	28
Hexachlorocyclopentadiene	0.666	0.453	0.536	68.0	80.5	15.0-120			16.8	31
Hexachloroethane	0.666	0.498	0.524	74.8	78.7	17.0-120			5.09	31
Indeno(1,2,3-cd)pyrene	0.666	0.559	0.691	83.9	104	45.0-120		J3	21.1	21
Isophorone	0.666	0.520	0.574	78.1	86.2	23.0-120			9.87	23
Naphthalene	0.666	0.429	0.459	64.4	68.9	18.0-120			6.76	24
Nitrobenzene	0.666	0.517	0.547	77.6	82.1	17.0-120			5.64	26
n-Nitrosodimethylamine	0.666	0.422	0.447	63.4	67.1	10.0-125			5.75	33
n-Nitrosodiphenylamine	0.666	0.514	0.610	77.2	91.6	40.0-120			17.1	21
n-Nitrosodi-n-propylamine	0.666	0.503	0.530	75.5	79.6	26.0-120			5.23	27
Phenanthrene	0.666	0.515	0.623	77.3	93.5	42.0-120			19.0	20
Benzylbutyl phthalate	0.666	0.638	0.785	95.8	118	40.0-120			20.7	21
Bis(2-ethylhexyl)phthalate	0.666	0.661	0.798	99.2	120	41.0-120			18.8	21
Di-n-butyl phthalate	0.666	0.605	0.743	90.8	112	43.0-120		J3	20.5	20
Diethyl phthalate	0.666	0.551	0.660	82.7	99.1	43.0-120			18.0	21
Dimethyl phthalate	0.666	0.526	0.629	79.0	94.4	43.0-120			17.8	22
Di-n-octyl phthalate	0.666	0.643	0.793	96.5	119	40.0-120			20.9	21
Pyrene	0.666	0.566	0.698	85.0	105	41.0-120			20.9	21
1,2,4-Trichlorobenzene	0.666	0.476	0.512	71.5	76.9	17.0-120			7.29	26
4-Chloro-3-methylphenol	0.666	0.554	0.650	83.2	97.6	28.0-120			15.9	20
2-Chlorophenol	0.666	0.480	0.504	72.1	75.7	28.0-120			4.88	28
2,4-Dichlorophenol	0.666	0.512	0.592	76.9	88.9	25.0-120			14.5	21
2,4-Dimethylphenol	0.666	0.507	0.575	76.1	86.3	15.0-120			12.6	26
4,6-Dinitro-2-methylphenol	0.666	0.481	0.543	72.2	81.5	16.0-120			12.1	33
2,4-Dinitrophenol	0.666	0.365	0.354	54.8	53.2	10.0-120			3.06	40
2-Nitrophenol	0.666	0.545	0.593	81.8	89.0	20.0-120			8.44	25
4-Nitrophenol	0.666	0.444	0.562	66.7	84.4	27.0-120			23.5	24
Pentachlorophenol	0.666	0.522	0.678	78.4	102	29.0-120		J3	26.0	25
Phenol	0.666	0.550	0.584	82.6	87.7	28.0-120			6.00	27
2,4,6-Trichlorophenol	0.666	0.539	0.649	80.9	97.4	37.0-120			18.5	24
(S) Nitrobenzene-d5				81.4	89.2	10.0-122				
(S) 2-Fluorobiphenyl				70.9	80.2	15.0-120				
(S) p-Terphenyl-d14				80.2	97.6	10.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357179-1 11/05/18 20:19 • (LCSD) R3357179-2 11/05/18 20:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
(S) Phenol-d5				78.5	85.4	10.0-120				
(S) 2-Fluorophenol				85.3	91.9	12.0-120				
(S) 2,4,6-Tribromophenol				81.4	98.3	10.0-127				

L1039662-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1039662-01 11/06/18 04:28 • (MS) R3357179-4 11/06/18 04:51 • (MSD) R3357179-5 11/06/18 05:14

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acenaphthene	0.815	U	0.625	0.686	76.7	84.2	2	18.0-120			9.33	32
Acenaphthylene	0.815	U	0.680	0.752	83.5	92.3	2	25.0-120			10.1	32
Anthracene	0.815	U	0.741	0.868	91.0	107	2	22.0-120			15.8	29
Benzo(a)anthracene	0.815	0.0135	0.742	0.856	89.5	103	2	25.0-120			14.2	29
Benzo(b)fluoranthene	0.815	0.0435	0.982	1.16	115	138	2	19.0-122		J5	17.0	31
Benzo(k)fluoranthene	0.815	U	0.878	1.05	108	129	2	23.0-120		J5	18.1	30
Benzo(g,h,i)perylene	0.815	U	0.462	0.501	56.8	61.6	2	10.0-120			8.12	33
Benzo(a)pyrene	0.815	0.0161	0.801	0.947	96.4	114	2	24.0-120			16.7	30
Bis(2-chlorethoxy)methane	0.815	U	0.641	0.692	78.7	85.0	2	10.0-120			7.71	34
Bis(2-chloroethyl)ether	0.815	U	0.659	0.700	80.9	85.9	2	10.0-120			5.94	40
Bis(2-chloroisopropyl)ether	0.815	U	0.565	0.564	69.4	69.2	2	10.0-120			0.217	40
4-Bromophenyl-phenylether	0.815	U	0.658	0.741	80.8	91.0	2	27.0-120			11.9	30
2-Chloronaphthalene	0.815	U	0.609	0.658	74.8	80.8	2	20.0-120			7.72	32
4-Chlorophenyl-phenylether	0.815	U	0.674	0.758	82.7	93.1	2	24.0-120			11.8	29
Chrysene	0.815	0.0177	0.784	0.892	94.1	107	2	21.0-120			12.8	29
Dibenz(a,h)anthracene	0.815	U	0.471	0.536	57.8	65.8	2	10.0-120			12.9	32
3,3-Dichlorobenzidine	0.815	U	0.298	0.340	36.6	41.7	2	10.0-120			13.0	34
2,4-Dinitrotoluene	0.815	U	0.744	0.893	91.3	110	2	30.0-120			18.2	31
2,6-Dinitrotoluene	0.815	U	0.686	0.755	84.2	92.6	2	25.0-120			9.51	31
Fluoranthene	0.815	0.0196	0.860	0.972	103	117	2	18.0-126			12.3	32
Fluorene	0.815	U	0.676	0.760	83.0	93.2	2	25.0-120			11.6	30
Hexachlorobenzene	0.815	U	0.671	0.779	82.4	95.6	2	27.0-120			14.8	28
Hexachloro-1,3-butadiene	0.815	U	0.625	0.637	76.7	78.2	2	10.0-120			1.94	38
Hexachlorocyclopentadiene	0.815	U	ND	ND	0.000	0.000	2	10.0-120	J6	J6	0.000	40
Hexachloroethane	0.815	U	0.497	0.481	61.0	59.0	2	10.0-120			3.25	40
Indeno(1,2,3-cd)pyrene	0.815	U	0.501	0.543	61.6	66.7	2	10.0-120			7.96	32
Isophorone	0.815	U	0.660	0.714	81.1	87.7	2	13.0-120			7.83	34
Naphthalene	0.815	U	0.560	0.590	68.8	72.4	2	10.0-120			5.11	35
Nitrobenzene	0.815	U	0.646	0.696	79.3	85.4	2	10.0-120			7.47	36
n-Nitrosodimethylamine	0.815	U	0.438	0.464	53.8	56.9	2	10.0-127			5.70	40

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1039662-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1039662-01 11/06/18 04:28 • (MS) R3357179-4 11/06/18 04:51 • (MSD) R3357179-5 11/06/18 05:14

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
n-Nitrosodiphenylamine	0.815	U	0.648	0.728	79.6	89.3	2	17.0-120			11.6	29
n-Nitrosodi-n-propylamine	0.815	U	0.675	0.691	82.9	84.8	2	10.0-120			2.33	37
Phenanthrene	0.815	U	0.701	0.791	86.0	97.1	2	17.0-120			12.1	31
Benzylbutyl phthalate	0.815	U	0.769	0.898	94.4	110	2	23.0-120			15.4	30
Bis(2-ethylhexyl)phthalate	0.815	U	0.793	0.942	97.3	116	2	17.0-126			17.2	30
Di-n-butyl phthalate	0.815	U	0.800	0.944	98.2	116	2	30.0-120			16.5	29
Diethyl phthalate	0.815	U	0.701	0.812	86.0	99.7	2	26.0-120			14.7	28
Dimethyl phthalate	0.815	U	0.659	0.733	80.9	89.9	2	25.0-120			10.5	29
Di-n-octyl phthalate	0.815	U	0.848	0.981	104	120	2	21.0-123			14.6	29
Pyrene	0.815	U	0.735	0.826	90.2	101	2	16.0-121			11.6	32
1,2,4-Trichlorobenzene	0.815	U	0.599	0.626	73.6	76.9	2	12.0-120			4.39	37
4-Chloro-3-methylphenol	0.815	U	0.737	0.839	90.5	103	2	15.0-120			12.9	30
2-Chlorophenol	0.815	U	0.618	0.648	75.8	79.6	2	15.0-120			4.83	37
2,4-Dichlorophenol	0.815	U	0.654	0.718	80.3	88.1	2	20.0-120			9.27	31
2,4-Dimethylphenol	0.815	U	0.630	0.656	77.3	80.5	2	10.0-120			4.00	33
4,6-Dinitro-2-methylphenol	0.815	U	ND	ND	0.000	0.000	2	10.0-120	J6	J6	0.000	39
2,4-Dinitrophenol	0.815	U	0.265	0.251	32.6	30.8	2	10.0-121			5.69	40
2-Nitrophenol	0.815	U	0.692	0.729	85.0	89.5	2	12.0-120			5.16	39
4-Nitrophenol	0.815	U	0.604	0.691	74.2	84.8	2	10.0-137			13.4	32
Pentachlorophenol	0.815	U	0.553	0.849	67.9	104	2	10.0-160		J3	42.2	31
Phenol	0.815	U	0.704	0.739	86.5	90.7	2	12.0-120			4.75	38
2,4,6-Trichlorophenol	0.815	U	0.634	0.750	77.8	92.0	2	19.0-120			16.8	32
(S) Nitrobenzene-d5					85.9	91.3		10.0-122				
(S) 2-Fluorobiphenyl					73.6	78.7		15.0-120				
(S) p-Terphenyl-d14					76.9	88.3		10.0-120				
(S) Phenol-d5					83.5	87.7		10.0-120				
(S) 2-Fluorophenol					90.4	95.5		12.0-120				
(S) 2,4,6-Tribromophenol					80.8	94.9		10.0-127				

Sample Narrative:
OS: Dilution due to matrix impact during extract concentration procedure

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3357672-3 11/06/18 10:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00642	0.0333
Acenaphthylene	U		0.00671	0.0333
Anthracene	U		0.00632	0.0333
Benzo(a)anthracene	U		0.00428	0.0333
Benzo(b)fluoranthene	U		0.00695	0.0333
Benzo(k)fluoranthene	U		0.00582	0.0333
Benzo(g,h,i)perylene	U		0.00721	0.0333
Benzo(a)pyrene	U		0.00548	0.0333
Bis(2-chlorethoxy)methane	U		0.00770	0.333
Bis(2-chloroethyl)ether	U		0.00896	0.333
Bis(2-chloroisopropyl)ether	U		0.00760	0.333
4-Bromophenyl-phenylether	U		0.0114	0.333
2-Chloronaphthalene	U		0.00639	0.0333
4-Chlorophenyl-phenylether	U		0.00627	0.333
Chrysene	U		0.00555	0.0333
Dibenz(a,h)anthracene	U		0.00821	0.0333
3,3-Dichlorobenzidine	U		0.0794	0.333
2,4-Dinitrotoluene	U		0.00607	0.333
2,6-Dinitrotoluene	U		0.00737	0.333
Fluoranthene	U		0.00496	0.0333
Fluorene	U		0.00682	0.0333
Hexachlorobenzene	U		0.00856	0.333
Hexachloro-1,3-butadiene	U		0.0100	0.333
Hexachlorocyclopentadiene	U		0.0587	0.333
Hexachloroethane	U		0.0134	0.333
Indeno(1,2,3-cd)pyrene	U		0.00772	0.0333
Isophorone	U		0.00522	0.333
Naphthalene	U		0.00889	0.0333
Nitrobenzene	U		0.00695	0.333
n-Nitrosodimethylamine	U		0.0647	0.333
n-Nitrosodiphenylamine	U		0.0900	0.333
n-Nitrosodi-n-propylamine	U		0.00906	0.333
Phenanthrene	U		0.00528	0.0333
Benzylbutyl phthalate	U		0.0103	0.333
Bis(2-ethylhexyl)phthalate	U		0.0120	0.333
Di-n-butyl phthalate	U		0.0109	0.333
Diethyl phthalate	U		0.00691	0.333
Dimethyl phthalate	U		0.00540	0.333
Di-n-octyl phthalate	U		0.00907	0.333
Pyrene	U		0.0123	0.0333

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3357672-3 11/06/18 10:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
1,2,4-Trichlorobenzene	U		0.00876	0.333
4-Chloro-3-methylphenol	U		0.00477	0.333
2-Chlorophenol	U		0.00831	0.333
2,4-Dichlorophenol	U		0.00746	0.333
2,4-Dimethylphenol	U		0.0471	0.333
4,6-Dinitro-2-methylphenol	U		0.124	0.333
2,4-Dinitrophenol	U		0.0980	0.333
2-Nitrophenol	U		0.0130	0.333
4-Nitrophenol	U		0.0525	0.333
Pentachlorophenol	U		0.0480	0.333
Phenol	U		0.00695	0.333
2,4,6-Trichlorophenol	U		0.00779	0.333
(S) Nitrobenzene-d5	81.4			10.0-122
(S) 2-Fluorobiphenyl	70.3			15.0-120
(S) p-Terphenyl-d14	76.6			10.0-120
(S) Phenol-d5	77.6			10.0-120
(S) 2-Fluorophenol	83.8			12.0-120
(S) 2,4,6-Tribromophenol	62.8			10.0-127

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357672-1 11/06/18 09:46 • (LCSD) R3357672-2 11/06/18 10:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.666	0.475	0.472	71.3	70.9	38.0-120			0.634	22
Acenaphthylene	0.666	0.483	0.482	72.5	72.4	40.0-120			0.207	22
Anthracene	0.666	0.479	0.487	71.9	73.1	42.0-120			1.66	20
Benzo(a)anthracene	0.666	0.487	0.494	73.1	74.2	44.0-120			1.43	20
Benzo(b)fluoranthene	0.666	0.518	0.546	77.8	82.0	43.0-120			5.26	22
Benzo(k)fluoranthene	0.666	0.534	0.535	80.2	80.3	44.0-120			0.187	21
Benzo(g,h,i)perylene	0.666	0.494	0.502	74.2	75.4	43.0-120			1.61	22
Benzo(a)pyrene	0.666	0.518	0.531	77.8	79.7	45.0-120			2.48	20
Bis(2-chlorethoxy)methane	0.666	0.485	0.489	72.8	73.4	20.0-120			0.821	23
Bis(2-chloroethyl)ether	0.666	0.528	0.524	79.3	78.7	16.0-120			0.760	31
Bis(2-chloroisopropyl)ether	0.666	0.438	0.444	65.8	66.7	23.0-120			1.36	30
4-Bromophenyl-phenylether	0.666	0.484	0.488	72.7	73.3	40.0-120			0.823	21
2-Chloronaphthalene	0.666	0.462	0.464	69.4	69.7	35.0-120			0.432	24
4-Chlorophenyl-phenylether	0.666	0.500	0.515	75.1	77.3	40.0-120			2.96	22
Chrysene	0.666	0.486	0.501	73.0	75.2	43.0-120			3.04	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357672-1 11/06/18 09:46 • (LCSD) R3357672-2 11/06/18 10:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Dibenz(a,h)anthracene	0.666	0.500	0.508	75.1	76.3	44.0-120			1.59	22
3,3-Dichlorobenzidine	0.666	0.492	0.496	73.9	74.5	28.0-120			0.810	23
2,4-Dinitrotoluene	0.666	0.569	0.566	85.4	85.0	45.0-120			0.529	21
2,6-Dinitrotoluene	0.666	0.520	0.516	78.1	77.5	42.0-120			0.772	21
Fluoranthene	0.666	0.481	0.489	72.2	73.4	44.0-120			1.65	21
Fluorene	0.666	0.497	0.499	74.6	74.9	41.0-120			0.402	22
Hexachlorobenzene	0.666	0.497	0.500	74.6	75.1	39.0-120			0.602	21
Hexachloro-1,3-butadiene	0.666	0.489	0.498	73.4	74.8	15.0-120			1.82	28
Hexachlorocyclopentadiene	0.666	0.494	0.492	74.2	73.9	15.0-120			0.406	31
Hexachloroethane	0.666	0.489	0.496	73.4	74.5	17.0-120			1.42	31
Indeno(1,2,3-cd)pyrene	0.666	0.486	0.492	73.0	73.9	45.0-120			1.23	21
Isophorone	0.666	0.501	0.510	75.2	76.6	23.0-120			1.78	23
Naphthalene	0.666	0.415	0.421	62.3	63.2	18.0-120			1.44	24
Nitrobenzene	0.666	0.499	0.506	74.9	76.0	17.0-120			1.39	26
n-Nitrosodimethylamine	0.666	0.407	0.389	61.1	58.4	10.0-125			4.52	33
n-Nitrosodiphenylamine	0.666	0.473	0.482	71.0	72.4	40.0-120			1.88	21
n-Nitrosodi-n-propylamine	0.666	0.492	0.494	73.9	74.2	26.0-120			0.406	27
Phenanthrene	0.666	0.467	0.481	70.1	72.2	42.0-120			2.95	20
Benzylbutyl phthalate	0.666	0.588	0.594	88.3	89.2	40.0-120			1.02	21
Bis(2-ethylhexyl)phthalate	0.666	0.603	0.612	90.5	91.9	41.0-120			1.48	21
Di-n-butyl phthalate	0.666	0.550	0.564	82.6	84.7	43.0-120			2.51	20
Diethyl phthalate	0.666	0.513	0.519	77.0	77.9	43.0-120			1.16	21
Dimethyl phthalate	0.666	0.492	0.504	73.9	75.7	43.0-120			2.41	22
Di-n-octyl phthalate	0.666	0.593	0.597	89.0	89.6	40.0-120			0.672	21
Pyrene	0.666	0.519	0.527	77.9	79.1	41.0-120			1.53	21
1,2,4-Trichlorobenzene	0.666	0.460	0.470	69.1	70.6	17.0-120			2.15	26
4-Chloro-3-methylphenol	0.666	0.528	0.549	79.3	82.4	28.0-120			3.90	20
2-Chlorophenol	0.666	0.487	0.476	73.1	71.5	28.0-120			2.28	28
2,4-Dichlorophenol	0.666	0.499	0.508	74.9	76.3	25.0-120			1.79	21
2,4-Dimethylphenol	0.666	0.513	0.520	77.0	78.1	15.0-120			1.36	26
4,6-Dinitro-2-methylphenol	0.666	0.458	0.458	68.8	68.8	16.0-120			0.000	33
2,4-Dinitrophenol	0.666	0.418	0.402	62.8	60.4	10.0-120			3.90	40
2-Nitrophenol	0.666	0.545	0.541	81.8	81.2	20.0-120			0.737	25
4-Nitrophenol	0.666	0.421	0.409	63.2	61.4	27.0-120			2.89	24
Pentachlorophenol	0.666	0.521	0.492	78.2	73.9	29.0-120			5.73	25
Phenol	0.666	0.541	0.536	81.2	80.5	28.0-120			0.929	27
2,4,6-Trichlorophenol	0.666	0.518	0.520	77.8	78.1	37.0-120			0.385	24
(S) Nitrobenzene-d5				84.7	79.9	10.0-122				
(S) 2-Fluorobiphenyl				71.2	67.6	15.0-120				
(S) p-Terphenyl-d14				76.9	73.6	10.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357672-1 11/06/18 09:46 • (LCSD) R3357672-2 11/06/18 10:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
(S) Phenol-d5				80.9	75.7	10.0-120				
(S) 2-Fluorophenol				91.0	83.3	12.0-120				
(S) 2,4,6-Tribromophenol				78.1	71.9	10.0-127				

L1039759-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1039759-03 11/07/18 15:27 • (MS) R3358054-2 11/07/18 11:36 • (MSD) R3358054-3 11/07/18 11:59

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acenaphthene	0.786	U	0.375	0.392	47.7	49.8	1	18.0-120			4.39	32
Acenaphthylene	0.786	U	0.365	0.382	46.5	48.6	1	25.0-120			4.50	32
Anthracene	0.786	U	0.419	0.424	53.4	54.0	1	22.0-120			1.14	29
Benzo(a)anthracene	0.786	U	0.416	0.447	52.9	56.9	1	25.0-120			7.24	29
Benzo(b)fluoranthene	0.786	U	0.389	0.445	49.5	56.6	1	19.0-122			13.3	31
Benzo(k)fluoranthene	0.786	U	0.385	0.445	48.9	56.6	1	23.0-120			14.5	30
Benzo(g,h,i)perylene	0.786	U	0.446	0.452	56.7	57.5	1	10.0-120			1.34	33
Benzo(a)pyrene	0.786	U	0.392	0.435	49.8	55.4	1	24.0-120			10.5	30
Bis(2-chlorethoxy)methane	0.786	U	0.252	0.380	32.1	48.3	1	10.0-120		J3	40.3	34
Bis(2-chloroethyl)ether	0.786	U	0.151	0.579	19.3	73.7	1	10.0-120		J3	117	40
Bis(2-chloroisopropyl)ether	0.786	U	0.311	0.294	39.6	37.5	1	10.0-120			5.56	40
4-Bromophenyl-phenylether	0.786	U	0.460	0.424	58.6	54.0	1	27.0-120			8.15	30
2-Chloronaphthalene	0.786	U	0.366	0.376	46.6	47.9	1	20.0-120			2.59	32
4-Chlorophenyl-phenylether	0.786	U	0.382	0.395	48.6	50.3	1	24.0-120			3.40	29
Chrysene	0.786	U	0.423	0.459	53.8	58.4	1	21.0-120			8.17	29
Dibenz(a,h)anthracene	0.786	U	0.437	0.449	55.7	57.2	1	10.0-120			2.71	32
3,3-Dichlorobenzidine	0.786	U	0.209	0.210	26.6	26.8	1	10.0-120			0.573	34
2,4-Dinitrotoluene	0.786	U	0.440	0.514	56.0	65.4	1	30.0-120			15.6	31
2,6-Dinitrotoluene	0.786	U	0.387	0.447	49.2	56.9	1	25.0-120			14.4	31
Fluoranthene	0.786	U	0.446	0.509	56.7	64.8	1	18.0-126			13.3	32
Fluorene	0.786	U	0.387	0.407	49.2	51.8	1	25.0-120			5.14	30
Hexachlorobenzene	0.786	U	0.485	0.460	61.8	58.6	1	27.0-120			5.34	28
Hexachloro-1,3-butadiene	0.786	U	0.387	0.369	49.2	46.9	1	10.0-120			4.77	38
Hexachlorocyclopentadiene	0.786	U	0.0948	0.141	12.1	17.9	1	10.0-120			38.9	40
Hexachloroethane	0.786	U	0.320	0.268	40.7	34.1	1	10.0-120			17.6	40
Indeno(1,2,3-cd)pyrene	0.786	U	0.437	0.451	55.7	57.3	1	10.0-120			2.98	32
Isophorone	0.786	U	0.239	0.362	30.4	46.0	1	13.0-120		J3	40.8	34
Naphthalene	0.786	U	0.335	0.347	42.7	44.2	1	10.0-120			3.52	35
Nitrobenzene	0.786	U	0.281	0.362	35.8	46.0	1	10.0-120			25.0	36
n-Nitrosodimethylamine	0.786	U	0.217	ND	27.7	0.000	1	10.0-127		J3 J6	200	40

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1039759-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1039759-03 11/07/18 15:27 • (MS) R3358054-2 11/07/18 11:36 • (MSD) R3358054-3 11/07/18 11:59

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
n-Nitrosodiphenylamine	0.786	U	0.378	0.362	48.2	46.0	1	17.0-120			4.55	29
n-Nitrosodi-n-propylamine	0.786	U	0.239	0.370	30.4	47.1	1	10.0-120	J3		43.0	37
Phenanthrene	0.786	U	0.423	0.416	53.8	52.9	1	17.0-120			1.72	31
Benzylbutyl phthalate	0.786	U	0.425	0.459	54.1	58.4	1	23.0-120			7.61	30
Bis(2-ethylhexyl)phthalate	0.786	U	0.430	0.452	54.7	57.5	1	17.0-126			4.90	30
Di-n-butyl phthalate	0.786	U	0.491	0.529	62.5	67.3	1	30.0-120			7.30	29
Diethyl phthalate	0.786	U	0.418	0.495	53.2	63.0	1	26.0-120			16.8	28
Dimethyl phthalate	0.786	U	0.378	0.447	48.2	56.9	1	25.0-120			16.6	29
Di-n-octyl phthalate	0.786	U	0.487	0.500	61.9	63.6	1	21.0-123			2.68	29
Pyrene	0.786	U	0.383	0.409	48.8	52.0	1	16.0-121			6.37	32
1,2,4-Trichlorobenzene	0.786	U	0.335	0.340	42.7	43.3	1	12.0-120			1.42	37
4-Chloro-3-methylphenol	0.786	U	0.387	0.323	49.2	41.1	1	15.0-120			17.9	30
2-Chlorophenol	0.786	U	0.192	0.244	24.5	31.0	1	15.0-120			23.7	37
2,4-Dichlorophenol	0.786	U	0.268	0.354	34.1	45.1	1	20.0-120			27.8	31
2,4-Dimethylphenol	0.786	U	0.260	0.362	33.0	46.0	1	10.0-120			32.9	33
4,6-Dinitro-2-methylphenol	0.786	U	0.457	0.741	58.1	94.3	1	10.0-120	J3		47.5	39
2,4-Dinitrophenol	0.786	U	0.451	0.719	57.3	91.4	1	10.0-121	J3		45.8	40
2-Nitrophenol	0.786	U	0.293	0.380	37.3	48.3	1	12.0-120			25.7	39
4-Nitrophenol	0.786	U	0.302	0.327	38.4	41.6	1	10.0-137			8.03	32
Pentachlorophenol	0.786	U	0.411	0.508	52.3	64.7	1	10.0-160			21.2	31
Phenol	0.786	U	0.231	0.239	29.4	30.4	1	12.0-120			3.58	38
2,4,6-Trichlorophenol	0.786	U	0.308	0.332	39.1	42.2	1	19.0-120			7.52	32
(S) Nitrobenzene-d5					37.0	40.4		10.0-122				
(S) 2-Fluorobiphenyl					47.4	48.0		15.0-120				
(S) p-Terphenyl-d14					49.5	55.4		10.0-120				
(S) Phenol-d5					28.4	32.6		10.0-120				
(S) 2-Fluorophenol					26.5	28.1		12.0-120				
(S) 2,4,6-Tribromophenol					59.0	54.3		10.0-127				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
P	RPD between the primary and confirmatory analysis exceeded 40%.

1	Cp
2	Tc
3	Ss
4	Cn
5	Sr
6	Qc
7	Gl
8	Al
9	Sc



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

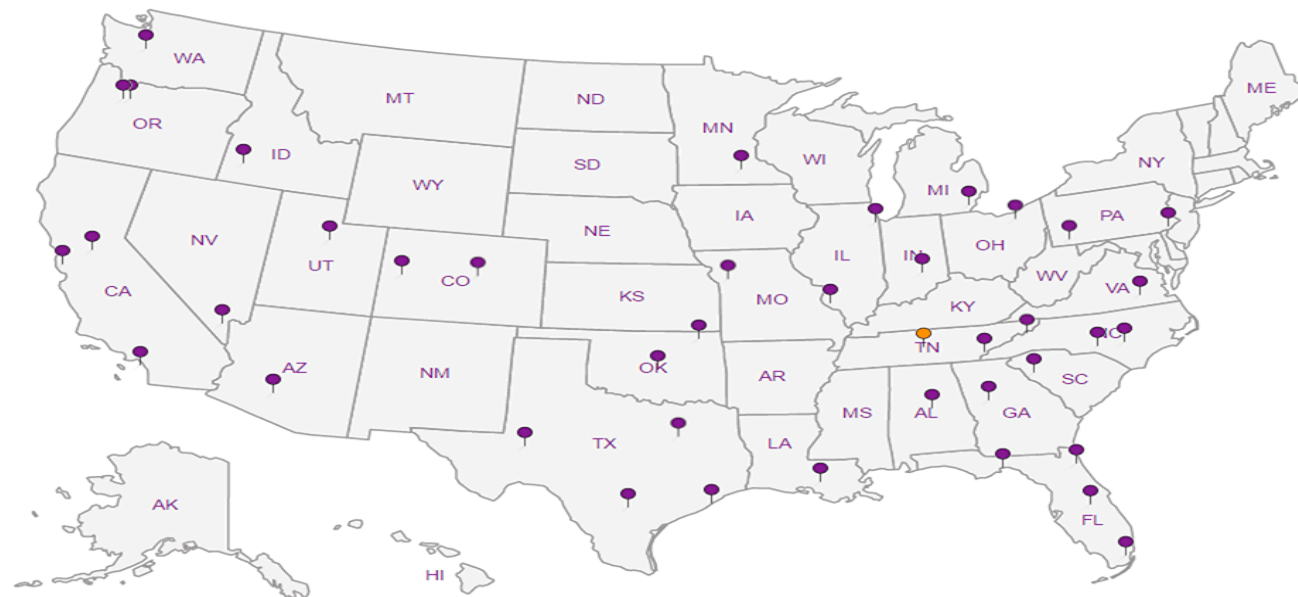
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: A.E.G., LLC		Billing Information: 605-11th Ave SE #201 Olympia, WA 98501	
Address: Portland, OR - office		Email To: CSwift@apegwa.com	
Report To: C. Swift		Site Collection Info/Address: 1200 W. 13th St, Vancouver, WA	
Copy To: C. Swift		State: WA County/City: _____ Time Zone Collected: [] PT [] MT [] CT [] ET	
Customer Project Name/Number: Vancouver Iron			
Phone:	Site/Facility ID #:	Compliance Monitoring? ☐ Yes ☒ No	
Email:	Purchase Order #: #18-222	DW PWS ID #: DW Location Code:	
Collected By (print): Charles Swift	Quote #:	Immediately Packed on Ice: ☒ Yes ☐ No	
Collected By (signature): <i>[Signature]</i>	Turnaround Date Required: Standard	Field Filtered (if applicable): ☐ Yes ☐ No	
Sample Disposal: ☒ Dispose as appropriate ☐ Return ☐ Archive: ☐ Hold:	Rush: ☐ Same Day ☐ Next Day ☐ 2 Day ☐ 3 Day ☐ 4 Day ☐ 5 Day (Expedite Charges Apply)	Analysis:	

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns
			Date	Time	Date	Time		
AOPCS-1	Soil	Gras	10/30/18	10:30				
AOPCS-2				10:35				
AOPCS-3				10:40				
AOPCS-4				10:45				
AOPC7-1				11:00				
AOPC7-2				11:10				
AOPC1-1				11:20				
AOPC1-2				11:25				
AOPC14-1				12:00				
Stockpile-1	Soil							

Customer Remarks / Special Conditions / Possible Hazards:	Type of Ice Used: Wet Blue Dry None
	Packing Material Used:
	Radchem sample(s) screened (<500 cpm): Y N NA

Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: 10/30/18 11:50	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 10/30/18 11:50
Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: 10/30/18 15:00	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 10/31/18 8:45

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Container Preservative Type **		Lab Project Manager:																																																																																																			
** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other																																																																																																					
Analyses		Lab Profile/Line:																																																																																																			
8RCRA Metals DRO/ORO-NWTPH-Rx GRO-NWTPH-6x VOCs - 8260 SVOCs - 8270 PCBs		Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N ☒ Custody Signatures Present Y N ☒ Collector Signature Present Y N ☒ Bottles Intact Y N ☒ Correct Bottles Y N ☒ Sufficient Volume Y N ☒ Samples Received on Ice Y N ☒ VOA - Headspace Acceptable Y N ☒ USDA Regulated Soils Y N ☒ Samples in Holding Time Y N ☒ Residual Chlorine Present Y N ☒ Cl Strips: _____ Sample pH Acceptable Y N ☒ pH Strips: _____ Sulfide Present Y N ☒ Lead Acetate Strips: _____ LAB USE ONLY: Lab Sample # / Comments: 103970																																																																																																			
<table border="1"> <thead> <tr> <th>Sample ID</th> <th>8RCRA Metals</th> <th>DRO/ORO-NWTPH-Rx</th> <th>GRO-NWTPH-6x</th> <th>VOCs - 8260</th> <th>SVOCs - 8270</th> <th>PCBs</th> <th>Res Cl</th> <th># of Ctns</th> </tr> </thead> <tbody> <tr><td>AOPCS-1</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td></td><td></td><td>01</td></tr> <tr><td>AOPCS-2</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td></td><td></td><td>02</td></tr> <tr><td>AOPCS-3</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td></td><td></td><td>03</td></tr> <tr><td>AOPCS-4</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td></td><td></td><td>04</td></tr> <tr><td>AOPC7-1</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td></td><td></td><td>05</td></tr> <tr><td>AOPC7-2</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td></td><td></td><td>06</td></tr> <tr><td>AOPC1-1</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td></td><td></td><td>07</td></tr> <tr><td>AOPC1-2</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td></td><td></td><td>08</td></tr> <tr><td>AOPC14-1</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td></td><td></td><td>09</td></tr> <tr><td>Stockpile-1</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td></td><td></td><td>10</td></tr> </tbody> </table>		Sample ID	8RCRA Metals	DRO/ORO-NWTPH-Rx	GRO-NWTPH-6x	VOCs - 8260	SVOCs - 8270	PCBs	Res Cl	# of Ctns	AOPCS-1	X	X	X	X	X			01	AOPCS-2	X	X	X	X	X			02	AOPCS-3	X	X	X	X	X			03	AOPCS-4	X	X	X	X	X			04	AOPC7-1	X	X	X	X	X			05	AOPC7-2	X	X	X	X	X			06	AOPC1-1	X	X	X	X	X			07	AOPC1-2	X	X	X	X	X			08	AOPC14-1	X	X	X	X	X			09	Stockpile-1	X	X	X	X	X			10	Lab Sample Temperature Info: Temp Blank Received: Y N ☒ Therm ID#: 103970 Cooler 1 Temp Upon Receipt: 51 oC Cooler 1 Therm Corr. Factor: 0.2 oC Cooler 1 Corrected Temp: 09 oC Comments: No Metals #10 AOPCS-1 0.5 mR/hr
Sample ID	8RCRA Metals	DRO/ORO-NWTPH-Rx	GRO-NWTPH-6x	VOCs - 8260	SVOCs - 8270	PCBs	Res Cl	# of Ctns																																																																																													
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AOPC1-1	X	X	X	X	X			07																																																																																													
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Stockpile-1	X	X	X	X	X			10																																																																																													
SHORT HOLDS PRESENT (<72 hours): Y N N/A Lab Tracking #: _____ Samples received via: FEDEX UPS Client Courier Pace Courier		Trip Blank Received: Y N NA HCL MeOH TSP Other Non Conformance(s): _____ Page: 1 YES / NO of: 2																																																																																																			

10 containers + 1 TB

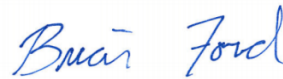
November 19, 2018

Associated Environmental - Olympia, WA

Sample Delivery Group: L1044865
Samples Received: 10/31/2018
Project Number: #18-222
Description: Vancouver Iron

Report To: Charles Swift
605 11th Ave SE
Suite 201
Olympia, WA 98501

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	³ Ss
STOCKPILE-1 L1044865-01	5	
STOCKPILE-2 L1044865-02	6	⁴ Cn
Qc: Quality Control Summary	7	⁵ Sr
Metals (ICP) by Method 6010D	7	
Gl: Glossary of Terms	8	⁶ Qc
Al: Accreditations & Locations	9	⁷ Gl
Sc: Sample Chain of Custody	10	⁸ Al
		⁹ Sc



STOCKPILE-1 L1044865-01 Waste

Collected by
Charles SwiftCollected date/time
10/29/18 00:00Received date/time
10/31/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Preparation by Method 1311	WG1197850	1	11/16/18 12:31	11/16/18 12:31	RT
Metals (ICP) by Method 6010D	WG1198324	1	11/17/18 14:14	11/18/18 12:24	ST

¹ Cp² Tc³ Ss

STOCKPILE-2 L1044865-02 Waste

Collected by
Charles SwiftCollected date/time
10/29/18 12:15Received date/time
10/31/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Preparation by Method 1311	WG1197850	1	11/16/18 12:31	11/16/18 12:31	RT
Metals (ICP) by Method 6010D	WG1198324	1	11/17/18 14:14	11/18/18 12:27	ST

⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		11/16/2018 12:31:51 PM	WG1197850
Fluid	1		11/16/2018 12:31:51 PM	WG1197850
Initial pH	8.19		11/16/2018 12:31:51 PM	WG1197850
Final pH	5.13		11/16/2018 12:31:51 PM	WG1197850

Metals (ICP) by Method 6010D

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	11/18/2018 12:24	WG1198324

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		11/16/2018 12:31:51 PM	WG1197850
Fluid	1		11/16/2018 12:31:51 PM	WG1197850
Initial pH	8.97		11/16/2018 12:31:51 PM	WG1197850
Final pH	5.71		11/16/2018 12:31:51 PM	WG1197850

Metals (ICP) by Method 6010D

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Chromium	ND		0.100	5	1	11/18/2018 12:27	WG1198324

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Method Blank (MB)

(MB) R3361017-1 11/18/18 11:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chromium	U		0.0333	0.100
Lead	U		0.0333	0.100

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3361017-2 11/18/18 11:33 • (LCSD) R3361017-3 11/18/18 11:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chromium	10.0	9.65	9.52	96.5	95.2	80.0-120			1.35	20
Lead	10.0	9.88	9.83	98.8	98.3	80.0-120			0.551	20

L1043814-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1043814-02 11/18/18 11:38 • (MS) R3361017-5 11/18/18 11:44 • (MSD) R3361017-6 11/18/18 11:46

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium	10.0	ND	9.50	9.67	95.0	96.7	1	75.0-125			1.71	20
Lead	10.0	ND	9.77	9.91	97.1	98.5	1	75.0-125			1.45	20



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

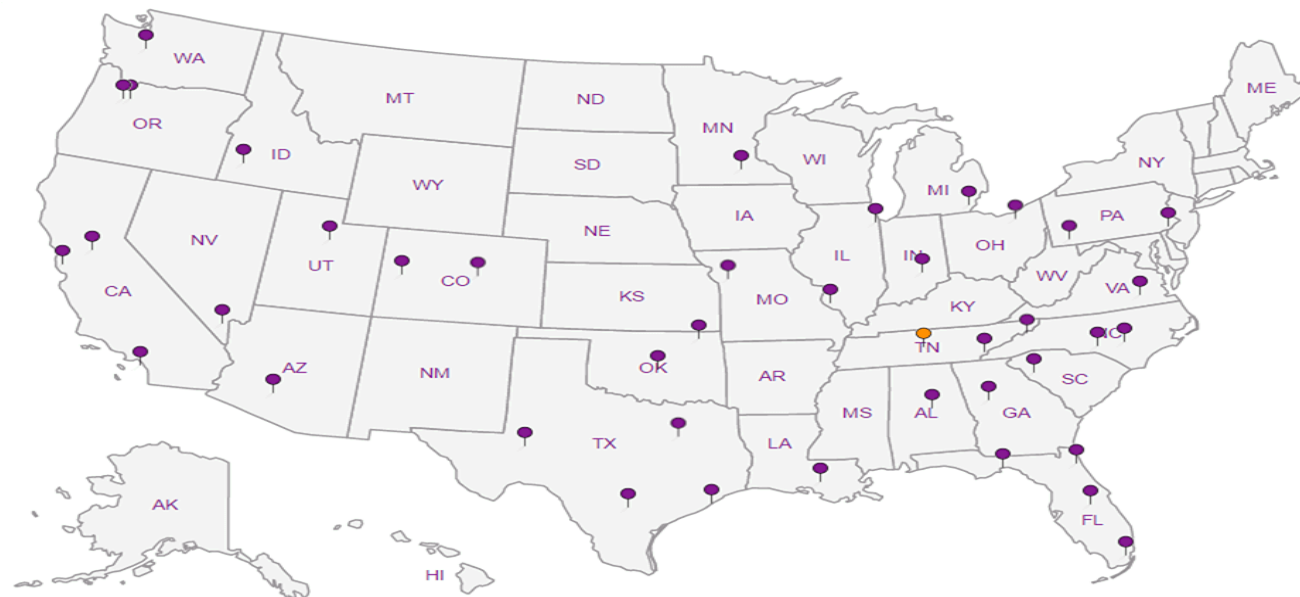
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



CHAIN-OF-CUSTODY Analytical Request Document

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: **A.E.G., LLC** Billing Information: **605-11th Ave SE #201 Olympia, WA 98501**

Address: **Portland, OR - Office** Email To: **CSwift@9854a.com**

Report To: **C. Swift** Site Collection Info/Address: **1800 W. 13th St., Vancouver, WA**

Copy To: **C. Swift** State: **WA** County/City: **WA** Time Zone Collected: **[] PT [] MT [] CT [] ET**

Customer Project Name/Number: **Vancouver Iron /** Compliance Monitoring? **[] Yes [X] No**

Phone: **Site/Facility ID #:** DW PWS ID #: **Quote #:** **#18-222**

Collected By (print): **Charles Swift** DW Location Code: **Standard**

Collected By (signature): **[Signature]** Immediately Packed on Ice: **[X] Yes [] No**

Sample Disposal: **[X] Dispose as appropriate [] Return** Field Filtered (if applicable): **[] Yes [] No**

[] Archive: Rush: **[] Same Day [] Next Day** Analysis: **[] Yes [] No**

[] Hold: **[] 2 Day [] 3 Day [] 4 Day [] 5 Day** (Expedite Charges Apply)

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res. Ct	# of Ctns
			Date	Time	Date	Time		
AOPCS-1	Soil	Gr.S	10/30/18	10:30				
AOPCS-2				10:35				
AOPCS-3				10:40				
AOPCS-4				10:45				
AOPC7-1				11:00				
AOPC7-2				11:10				
AOPC1-1				11:20				
AOPC1-2				11:25				
AOPC14-1				12:00				
Stackpile - 1	Soil							

8 RCRA Metals	PRO/ORO-NWTPH-Px	GRD-NWTPH-Gr	VOCs - 8260	SVOCs - 8270	PCBs
	X	X	X	X	
	X	X	X	X	
	X	X	X	X	
	X	X	X	X	
	X	X	X	X	
	X	X	X	X	
	X	X	X	X	
	X	X	X	X	
	X	X	X	X	
	X	X	X	X	

Lab Profile/Line: **Lab Sample Receipt Checklist:**

Custody Seal Present/Intact **Y N NA**

Custody Signatures Present **Y N NA**

Collector Signature Present **Y N NA**

Bottles Intact **Y N NA**

Correct Bottles **Y N NA**

Sufficient Volume **Y N NA**

Samples Received on Ice **Y N NA**

VNA - Headspace Acceptable **Y N NA**

USDA Regulated Soils **Y N NA**

Samples in Holding Time **Y N NA**

Residual Chlorine Present **Y N NA**

Cl Strips: **Y N NA**

Sample pH Acceptable **Y N NA**

pH Strips: **Y N NA**

Sulfide Present **Y N NA**

Lead Acetate Strips: **Y N NA**

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards: **Type of Ice Used: Wet Blue Dry None**

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:

Temp Blank Received: **Y N NA**

Therm ID#: **4342**

Cooler 1 Temp Upon Receipt: **51 oC**

Cooler 1 Therm Corr. Factor: **0.2 oC**

Cooler 1 Corrected Temp: **0.9 oC**

Comments: **2000000000 mR/hr**

Relinquished by/Company: (Signature) **[Signature]** Date/Time: **10/30/18 11:50**

Relinquished by/Company: (Signature) **[Signature]** Date/Time: **10/30/18 15:00**

Relinquished by/Company: (Signature) **[Signature]** Date/Time: **10/31/18 0:00**

Date/Time: **10/30/18 11:50**

Date/Time: **10/30/18 11:50**

Date/Time: **10/31/18 0:00**

Lab Sample Temperature Info:

Trip Blank Received: **Y N NA**

HCL MeOH TSP Other

Non Conformance(s): **Page: 1**

Wasco County Landfill
2550 Steele Road
The Dalles, OR 97058
PH: 541.296.4082
FX: 541.296.6449



APPROVAL NUMBER:
AMENDMENT NUMBER:
EXPIRATION DATE:
APPROVED BY:

SPECIAL WASTE PERMIT

(This Page for OFFICE USE ONLY)

GENERATOR:

CUSTOMER:

H. ENVIRONMENTAL COMPLIANCE SUPERVISOR DECISION

1. Acceptable Not Acceptable Reason

2. Name:

3. Date:

4. Signature:

5. Phone:

I. INSTRUCTIONS/HANDLING PROCEDURES

This Section is to be completed by BOTH the Environmental Compliance Supervisor and the Facility Manager.

1. Disposal Method(s): Landfill Solidification Approved ADC Other:

2. Review and approval of waste is based upon a submitted documentation from generator/customer, the Landfill Waste Acceptance Criteria, and any applicable State or Federal waste disposal regulations. Approval is granted subject to the enforcement of the following conditions. Failure to comply may result in rejection of the wastes.

- A. Customer/Generator shall receive a copy of this sheet upon approval and shall conform to all instructions/limitations noted herein.
- B. Loads may be randomly inspected upon receipt at the landfill to ensure wastes conform to description on Application.
- C. This material must be properly contained, bagged, or covered prior to and during shipment and disposal.

3. The conditions marked below apply to this waste stream.

APPROVAL CONDITION(S):

CONDITIONAL APPROVAL: This is a conditional approval/extension. Upon receipt of additional analyses, this approval may be extended.

SPECIFIC CONDITION:

BLANKET APPROVAL: The manifest accompanying each load of waste shall denote the specific waste generation address/location(s) for that load.

WASTE CONDITION(S):

ABSORBENT MATERIALS: Absorbent material (pads, booms, diapers, socks, soils, etc.) must not be supersaturated so as to release free liquids on handling. Wastes that would not pass a paint filter test must be solidified prior to placement in the landfill.

ASBESTOS CONTAINING MATERIAL (ACM): Friable Non-Friable

FREE LIQUIDS/SLUDGE:

OTHER:

LANDFILL SPECIAL HANDLING PROCEDURES:

CARE UNLOADING: Maintain integrity of container/packaging.

DUST: Materials may become airborne. Use appropriate control measures to prevent the material from becoming airborne.

IRRITANT DUST: Materials may be dusty and are likely to cause irritation to skin and/or eyes. Use appropriate dust control measures and PPE as needed to prevent airborne dust and/or employee exposure. See MSDS for additional information.

ODOR: Bury immediately upon arrival.

SLUDGE: Potential traction issue on work face.

SPECIAL BURIAL REQUIREMENTS: Immediately cover waste MSW Dirt prior to compaction.

SURVEY REQUIREMENT: Materials must be surveyed in or indicated on a grid.

OTHER:

CALL LANDFILL: Prior to disposal, contact landfill to arrange for delivery (Liquids, Totes, and Asbestos).



WASTE CONNECTIONS INC.

Waste profile name: Vancouver Iron Works

ID: a99965bd-425c-409f-9416-163bb81aa2ef

Status:

PENDING

GENERATOR

Name: Vancouver Iron & Steel

Address: 1200 West 13th Street City: Vancouver State: WA Postal Code: 98660

County: Clark

Contact: _____ Email: _____

Phone: _____ Fax: _____

MATERIAL ORIGIN

Address: 1200 West 13th Street City: Vancouver State: WA Postal Code: 98660

County: Clark

EPA ID: _____ State ID: _____

DESTINATION WASTE FACILITY

Name: Wasco County LF

Address: 2550 Steele Road City: The Dalles State: OR Postal Code: 97058

County: _____

Contact: _____ Email: _____

Phone: _____ Fax: _____

BILLING

Name: Magna Construction Services, Inc.

Address: 13023 NE Hwy 99 City: Vancouver State: WA Postal Code: 98686

County: Clark

Contact: _____ Email: _____

Phone: _____ Fax: _____

TRANSPORTER

Transporter Name: _____

Contact: _____ Email: _____

Phone: _____ Fax: _____

MATERIAL

Is this an Industrial Waste Stream? ☐ Yes ☒ No

Common Name: Soil

Generation Process: Soil was excavated from areas identified as RECs from around the site several locations.

Preferred Disposal Methods: NH001

Source of Contamination: _____

MATERIAL COMPOSITION

Constituent	_____	TO	_____
Constituent	_____	TO	_____
Constituent	_____	TO	_____

State Waste Codes: _____

Color: _____

Physical state at 70° F: ☒ Solid ☐ Liquid ☐ Sludge ☐ Dust ☐ Other

pH 6 TO 7

Strong Odor No Describe Odor _____

Reactivity No

Flash Point ☐ < 140°F ☐ 140°-199°F ☒ > 200°F ☐ N/A

REGULATORY

EPA Hazardous Waste? ☐ Yes ☒ No

If No, Attached Non-Hazardous Determination Document(s) (Check all that apply)

☐ Process Knowledge Process Details _____☐ SDS☒ Certified Analytical SampleIs the data derived from testing a representative sample in accordance with 40 CFR 261 and/or other applicable laws? ☒ Yes ☐ NoIf Yes, Type of Analytical Sample ☐ Composite ☒ Grab Sample ID # _____☐ Exempt Waste

Applicable Exempt Waste Item

☐ UST Corrective Action - 40 CFR 261.4 (b)(10) ☐ PCB Bulk Product Waste - 40 CFR 761.62 ☐ Oil & Gas E&P Waste - 40 CFR 261.4 (b)(5) ☐ RCRA-Empty Containers - 40 CFR 261.7 ☐ Other

If Other, Provided reference _____

State Hazardous Waste? ☒ Yes ☐ NoIs this material non-hazardous due to treatment, delisting, or exclusion? ☐ Yes ☒ NoFrom an industry regulated under Benzene NESHA? ☐ Yes ☒ NoFacility remediation subject to 40 CFR 63 GGGGG? ☐ Yes ☒ NoCERCLA or State-Mandated clean-up? ☐ Yes ☒ NoRegulated, Licensed or NORM Radioactive Waste? ☐ Yes ☐ No

If Yes, Identify isotopes and pCi/g

Isotope _____ PCI/G _____

Isotope _____ PCI/G _____

Isotope _____ PCI/G _____

Contains PCBs? ☐ Yes ☐ No

If Yes

Regulated by 40 CFR 761? ☐ Yes ☐ NoRemediation under 40 CFR 761.61 (a)? ☐ Yes ☐ NoPCB imported into the US? ☐ Yes ☐ NoRegulated and/or Untreated Medical/Infectious Waste? ☐ Yes ☐ NoContains Asbestos? ☐ Yes ☐ NoIf Yes, Is the Asbestos Friable or Non-Friable? ☐ Friable ☐ Non-Friable ☐ Non-Friable RegulatedSubject to RCRA Subpart CC controls? ☐ Yes ☐ No**SHIPPING & DOT**Event Frequency ☐ One Time ☒ On-Going

Estimated Annual Qty 1300 _____

Unit of Measure ☐ Tons ☒ Yards ☐ Drums ☐ Gallons ☐ Other _____

Shipping Frequency

☒ Once ☐ Daily ☐ Weekly ☐ Monthly ☐ Other _____

Qty Per Shipment 20 cubic yards _____

Container Type Truck and pup _____

Container Size _____

USDOT Shipping Name _____

PROFILE CERTIFICATION

I hereby certify that (1) all information submitted on this form and on supplemental materials is complete and accurate to the best of my knowledge and ability to determine; (2) the information provided herein, including any supplemental information, such as laboratory analytical, MSDS, etc., accurately describes the waste stream to be delivered to the facility and that all known or suspected hazards have been disclosed. I understand that, once the waste stream is approved by Destination Facility based on this information, any deviation in the source, composition, constituents or characteristics of the waste stream from the information described herein, may render the waste stream unacceptable for disposal, at the sole discretion of Destination Facility. I further understand that any deviation from the information contained herein will require immediate notification to the Destination Facility and cessation of disposal.

Charles Swift

Certified on 11/26/18 by Charles Swift as a Authorized Agent of Associated Environmental Group, LLC