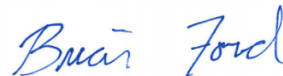


Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L866261
Samples Received: 10/15/2016
Project Number:
Description: APES Tank 12

Report To: Sarah Rockwell/Laurey Cook
3150 NW 229th St., Suite 150
Hillsboro, OR 97124

Entire Report Reviewed By:



Brian Ford
Technical Service Representative

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 ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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SAMPLE SUMMARY



TANK-TOP L866261-01 Solid

			Collected by NRC	Collected date/time 10/13/16 14:44	Received date/time 10/15/16 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG918239	1	10/18/16 13:57	10/19/16 10:29	NJB
Metals (ICP) by Method 6010B	WG917946	1	10/18/16 12:05	10/18/16 21:34	ST
Polychlorinated Biphenyls (GC) by Method 8082M	WG919103	5	10/19/16 08:48	10/20/16 14:07	JNS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG918603	25000	10/19/16 10:41	10/19/16 23:00	DMG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918050	4900	10/19/16 11:15	10/20/16 08:04	JAH
Wet Chemistry by Method 9076	WG918978	.92	10/20/16 14:52	10/20/16 14:52	AS

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

TANK-TOP L866261-02 Waste

			Collected by NRC	Collected date/time 10/13/16 14:44	Received date/time 10/15/16 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG918081	1	10/18/16 13:01	10/18/16 14:34	NJB
Metals (ICP) by Method 6010B	WG917894	1	10/17/16 18:48	10/17/16 23:06	ST
Preparation by Method 1311	WG917669	1	10/16/16 13:05	10/16/16 13:05	LJN
Preparation by Method 1311	WG917806	1	10/17/16 08:18	10/17/16 08:18	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918118	2	10/18/16 12:03	10/18/16 12:03	JAH
Wet Chemistry by Method D93/1010A	WG917542	1	10/18/16 04:45	10/18/16 04:45	JLJ

TANK-18D L866261-03 Solid

			Collected by NRC	Collected date/time 10/13/16 15:54	Received date/time 10/15/16 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG918239	1	10/18/16 13:57	10/19/16 10:32	NJB
Metals (ICP) by Method 6010B	WG917946	1	10/18/16 12:05	10/18/16 21:37	ST
Polychlorinated Biphenyls (GC) by Method 8082M	WG919103	5	10/19/16 08:48	10/20/16 14:19	JNS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG918603	25000	10/19/16 10:41	10/19/16 23:18	DMG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918050	4950	10/19/16 11:15	10/20/16 08:24	JAH
Wet Chemistry by Method 9076	WG918978	.89	10/20/16 15:06	10/20/16 15:06	AS

TANK-18D L866261-04 Waste

			Collected by NRC	Collected date/time 10/13/16 15:54	Received date/time 10/15/16 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG918081	1	10/18/16 13:01	10/18/16 14:46	NJB
Metals (ICP) by Method 6010B	WG917894	1	10/17/16 18:48	10/17/16 23:09	ST
Preparation by Method 1311	WG917669	1	10/16/16 13:05	10/16/16 13:05	LJN
Preparation by Method 1311	WG917806	1	10/17/16 08:18	10/17/16 08:18	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918118	1	10/18/16 12:23	10/18/16 12:23	JAH

TANK-18D DUPLICATE L866261-05 Solid

			Collected by NRC	Collected date/time 10/13/16 16:15	Received date/time 10/15/16 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Polychlorinated Biphenyls (GC) by Method 8082M	WG919103	5	10/19/16 08:48	10/20/16 14:32	JNS



TANK-18D DUPLICATE L866261-06 Waste

Collected by NRC
 Collected date/time 10/13/16 16:15
 Received date/time 10/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG918081	1	10/18/16 13:01	10/18/16 14:49	NJB
Metals (ICP) by Method 6010B	WG917894	1	10/17/16 18:48	10/17/16 23:12	ST
Preparation by Method 1311	WG917669	1	10/16/16 13:05	10/16/16 13:05	LJN
Preparation by Method 1311	WG917806	1	10/17/16 08:18	10/17/16 08:18	BG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918118	2	10/18/16 12:44	10/18/16 12:44	JAH

¹ Cp

² Tc

³ Ss

⁴ Cn

TANK-24D L866261-07 GW

Collected by NRC
 Collected date/time 10/13/16 16:45
 Received date/time 10/15/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG918499	100	10/19/16 11:10	10/19/16 17:26	NJB
Metals (ICP) by Method 6010B	WG917577	9	10/18/16 18:03	10/19/16 15:03	ST
Polychlorinated Biphenyls (GC) by Method 8082	WG917710	20	10/16/16 21:31	10/19/16 14:33	JNS
Volatile Organic Compounds (GC/MS) by Method 8260B	WG918024	2000	10/20/16 04:39	10/20/16 04:39	DWR

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



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
 Technical Service Representative

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

Project Narrative

L866261-02,-04,-06; 1311/V8260TCLP: Due to sample matrix, standard ZHE container could not be used. A 500ml amber glass jar was used instead. Zero headspace cannot be guaranteed due to the sample matrix issues.

Sample Handling and Receiving

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

<u>ESC Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L866261-07	TANK-24D	6010B



Wet Chemistry by Method 9076

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TOX	197		7.25	18.4	.92	10/20/2016 14:52	WG918978

Mercury by Method 7471A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.00457	J	0.00280	0.0200	1	10/19/2016 10:29	WG918239

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	0.706	J	0.650	2.00	1	10/18/2016 21:34	WG917946
Barium	1.32		0.170	0.500	1	10/18/2016 21:34	WG917946
Cadmium	U		0.0700	0.500	1	10/18/2016 21:34	WG917946
Chromium	0.157	J	0.140	1.00	1	10/18/2016 21:34	WG917946
Lead	9.58		0.190	0.500	1	10/18/2016 21:34	WG917946
Selenium	U		0.740	2.00	1	10/18/2016 21:34	WG917946
Silver	U		0.280	1.00	1	10/18/2016 21:34	WG917946

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		49.0	245	4900	10/20/2016 08:04	WG918050
Acrylonitrile	U		8.77	49.0	4900	10/20/2016 08:04	WG918050
Benzene	46.0		1.32	4.90	4900	10/20/2016 08:04	WG918050
Bromobenzene	U		1.39	4.90	4900	10/20/2016 08:04	WG918050
Bromodichloromethane	U		1.24	4.90	4900	10/20/2016 08:04	WG918050
Bromoform	U		2.08	4.90	4900	10/20/2016 08:04	WG918050
Bromomethane	U		6.57	24.5	4900	10/20/2016 08:04	WG918050
n-Butylbenzene	33.4		1.26	4.90	4900	10/20/2016 08:04	WG918050
sec-Butylbenzene	16.9		0.985	4.90	4900	10/20/2016 08:04	WG918050
tert-Butylbenzene	U		1.01	4.90	4900	10/20/2016 08:04	WG918050
Carbon disulfide	U		1.08	4.90	4900	10/20/2016 08:04	WG918050
Carbon tetrachloride	U		1.61	4.90	4900	10/20/2016 08:04	WG918050
Chlorobenzene	U		1.04	4.90	4900	10/20/2016 08:04	WG918050
Chlorodibromomethane	U		1.83	4.90	4900	10/20/2016 08:04	WG918050
Chloroethane	U		4.64	24.5	4900	10/20/2016 08:04	WG918050
2-Chloroethyl vinyl ether	U		11.5	245	4900	10/20/2016 08:04	WG918050
Chloroform	U		1.12	24.5	4900	10/20/2016 08:04	WG918050
Chloromethane	U		1.84	12.3	4900	10/20/2016 08:04	WG918050
2-Chlorotoluene	U		1.47	4.90	4900	10/20/2016 08:04	WG918050
4-Chlorotoluene	U		1.18	4.90	4900	10/20/2016 08:04	WG918050
1,2-Dibromo-3-Chloropropane	U		5.14	24.5	4900	10/20/2016 08:04	WG918050
1,2-Dibromoethane	U		1.68	4.90	4900	10/20/2016 08:04	WG918050
Dibromomethane	U		1.87	4.90	4900	10/20/2016 08:04	WG918050
1,2-Dichlorobenzene	U		1.49	4.90	4900	10/20/2016 08:04	WG918050
1,3-Dichlorobenzene	U		1.17	4.90	4900	10/20/2016 08:04	WG918050
1,4-Dichlorobenzene	U		1.11	4.90	4900	10/20/2016 08:04	WG918050
Dichlorodifluoromethane	U		3.49	24.5	4900	10/20/2016 08:04	WG918050
1,1-Dichloroethane	U		0.975	4.90	4900	10/20/2016 08:04	WG918050
1,2-Dichloroethane	U		1.30	4.90	4900	10/20/2016 08:04	WG918050
1,1-Dichloroethene	U		1.48	4.90	4900	10/20/2016 08:04	WG918050
cis-1,2-Dichloroethene	U		1.15	4.90	4900	10/20/2016 08:04	WG918050
trans-1,2-Dichloroethene	U		1.29	4.90	4900	10/20/2016 08:04	WG918050
1,2-Dichloropropane	U		1.75	4.90	4900	10/20/2016 08:04	WG918050

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 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloropropene	U		1.55	4.90	4900	10/20/2016 08:04	WG918050
1,3-Dichloropropane	U		1.01	4.90	4900	10/20/2016 08:04	WG918050
cis-1,3-Dichloropropene	U		1.28	4.90	4900	10/20/2016 08:04	WG918050
trans-1,3-Dichloropropene	U		1.31	4.90	4900	10/20/2016 08:04	WG918050
2,2-Dichloropropane	U		1.37	4.90	4900	10/20/2016 08:04	WG918050
Di-isopropyl ether	U		1.22	4.90	4900	10/20/2016 08:04	WG918050
Ethylbenzene	184		1.46	4.90	4900	10/20/2016 08:04	WG918050
Hexachloro-1,3-butadiene	U		1.68	4.90	4900	10/20/2016 08:04	WG918050
Isopropylbenzene	20.7		1.19	4.90	4900	10/20/2016 08:04	WG918050
p-Isopropyltoluene	9.46		1.00	4.90	4900	10/20/2016 08:04	WG918050
2-Butanone (MEK)	U		22.9	49.0	4900	10/20/2016 08:04	WG918050
Methylene Chloride	U		4.90	24.5	4900	10/20/2016 08:04	WG918050
4-Methyl-2-pentanone (MIBK)	U		9.21	49.0	4900	10/20/2016 08:04	WG918050
Methyl tert-butyl ether	U		1.04	4.90	4900	10/20/2016 08:04	WG918050
Naphthalene	142		4.90	24.5	4900	10/20/2016 08:04	WG918050
n-Propylbenzene	85.8		1.01	4.90	4900	10/20/2016 08:04	WG918050
Styrene	U		1.15	4.90	4900	10/20/2016 08:04	WG918050
1,1,1,2-Tetrachloroethane	U		1.29	4.90	4900	10/20/2016 08:04	WG918050
1,1,2,2-Tetrachloroethane	U		1.79	4.90	4900	10/20/2016 08:04	WG918050
1,1,2-Trichlorotrifluoroethane	U		1.79	4.90	4900	10/20/2016 08:04	WG918050
Tetrachloroethene	33.4		1.35	4.90	4900	10/20/2016 08:04	WG918050
Toluene	529		2.13	24.5	4900	10/20/2016 08:04	WG918050
1,2,3-Trichlorobenzene	U		1.50	4.90	4900	10/20/2016 08:04	WG918050
1,2,4-Trichlorobenzene	U		1.90	4.90	4900	10/20/2016 08:04	WG918050
1,1,1-Trichloroethane	U		1.40	4.90	4900	10/20/2016 08:04	WG918050
1,1,2-Trichloroethane	U		1.36	4.90	4900	10/20/2016 08:04	WG918050
Trichloroethene	U		1.37	4.90	4900	10/20/2016 08:04	WG918050
Trichlorofluoromethane	U		1.87	24.5	4900	10/20/2016 08:04	WG918050
1,2,3-Trichloropropane	U		3.63	12.3	4900	10/20/2016 08:04	WG918050
1,2,4-Trimethylbenzene	475		1.03	4.90	4900	10/20/2016 08:04	WG918050
1,2,3-Trimethylbenzene	107		1.41	4.90	4900	10/20/2016 08:04	WG918050
1,3,5-Trimethylbenzene	146		1.30	4.90	4900	10/20/2016 08:04	WG918050
Vinyl chloride	U		1.42	4.90	4900	10/20/2016 08:04	WG918050
Xylenes, Total	1120		3.42	14.7	4900	10/20/2016 08:04	WG918050
(S) Toluene-d8	102			88.7-115		10/20/2016 08:04	WG918050
(S) Dibromofluoromethane	94.1			76.3-123		10/20/2016 08:04	WG918050
(S) a,a,a-Trifluorotoluene	102			87.2-117		10/20/2016 08:04	WG918050
(S) 4-Bromofluorobenzene	106			69.7-129		10/20/2016 08:04	WG918050

- 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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	215000		33000	100000	25000	10/19/2016 23:00	WG918603
Residual Range Organics (RRO)	603000		82500	250000	25000	10/19/2016 23:00	WG918603
(S) o-Terphenyl	0.000	J7		50.0-150		10/19/2016 23:00	WG918603

Polychlorinated Biphenyls (GC) by Method 8082M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		1.65	5.00	5	10/20/2016 14:07	WG919103
PCB 1221	U		1.65	5.00	5	10/20/2016 14:07	WG919103
PCB 1232	U		1.65	5.00	5	10/20/2016 14:07	WG919103
PCB 1242	U		1.65	5.00	5	10/20/2016 14:07	WG919103
PCB 1248	12.3		1.65	5.00	5	10/20/2016 14:07	WG919103
PCB 1254	U		1.65	5.00	5	10/20/2016 14:07	WG919103



Polychlorinated Biphenyls (GC) by Method 8082M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
PCB 1260	U		1.65	5.00	5	10/20/2016 14:07	WG919103
(S) Decachlorobiphenyl	136		0.330	60.0-140		10/20/2016 14:07	WG919103
(S) Tetrachloro-m-xylene	81.8		0.330	60.0-140		10/20/2016 14:07	WG919103

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	-		10/16/2016 1:05:26 PM	WG917669
TCLP ZHE Extraction	-		10/17/2016 8:18:20 AM	WG917806
Fluid	1		10/16/2016 1:05:26 PM	WG917669
Initial pH	n/a		10/16/2016 1:05:26 PM	WG917669
Final pH	n/a		10/16/2016 1:05:26 PM	WG917669

1 Cp

2 Tc

3 Ss

4 Cn

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Ignitability	160		1	10/18/2016 04:45	WG917542

5 Sr

6 Qc

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
Mercury	ND		0.0100	0.20	1	10/18/2016 14:34	WG918081

7 Gl

8 Al

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
Arsenic	ND		0.100	5	1	10/17/2016 23:06	WG917894
Barium	0.0561		0.0500	100	1	10/17/2016 23:06	WG917894
Cadmium	ND		0.0200	1	1	10/17/2016 23:06	WG917894
Chromium	ND		0.100	5	1	10/17/2016 23:06	WG917894
Lead	0.0695	B	0.0500	5	1	10/17/2016 23:06	WG917894
Selenium	ND		0.100	1	1	10/17/2016 23:06	WG917894
Silver	ND		0.0500	5	1	10/17/2016 23:06	WG917894

9 Sc

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

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
Benzene	0.729		0.100	0.50	2	10/18/2016 12:03	WG918118
Carbon tetrachloride	ND		0.100	0.50	2	10/18/2016 12:03	WG918118
Chlorobenzene	ND		0.100	100	2	10/18/2016 12:03	WG918118
Chloroform	ND		0.500	6	2	10/18/2016 12:03	WG918118
1,2-Dichloroethane	ND		0.100	0.50	2	10/18/2016 12:03	WG918118
1,1-Dichloroethene	ND		0.100	0.70	2	10/18/2016 12:03	WG918118
2-Butanone (MEK)	ND	J3	1.00	200	2	10/18/2016 12:03	WG918118
Tetrachloroethene	0.345		0.100	0.70	2	10/18/2016 12:03	WG918118
Trichloroethene	ND		0.100	0.50	2	10/18/2016 12:03	WG918118
Vinyl chloride	ND		0.100	0.20	2	10/18/2016 12:03	WG918118
(S) Toluene-d8	97.6		90.0-115	114		10/18/2016 12:03	WG918118
(S) Dibromofluoromethane	94.4		79.0-121	125		10/18/2016 12:03	WG918118
(S) a,a,a-Trifluorotoluene	101		90.4-116	114		10/18/2016 12:03	WG918118
(S) 4-Bromofluorobenzene	103		80.1-120	128		10/18/2016 12:03	WG918118



Wet Chemistry by Method 9076

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TOX	181	J6	7.01	17.8	.89	10/20/2016 15:06	WG918978

Mercury by Method 7471A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.00419	J	0.00280	0.0200	1	10/19/2016 10:32	WG918239

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	U		0.650	2.00	1	10/18/2016 21:37	WG917946
Barium	1.32		0.170	0.500	1	10/18/2016 21:37	WG917946
Cadmium	U		0.0700	0.500	1	10/18/2016 21:37	WG917946
Chromium	U		0.140	1.00	1	10/18/2016 21:37	WG917946
Lead	9.58		0.190	0.500	1	10/18/2016 21:37	WG917946
Selenium	U		0.740	2.00	1	10/18/2016 21:37	WG917946
Silver	U		0.280	1.00	1	10/18/2016 21:37	WG917946

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		49.5	248	4950	10/20/2016 08:24	WG918050
Acrylonitrile	U		8.86	49.5	4950	10/20/2016 08:24	WG918050
Benzene	45.2		1.34	4.95	4950	10/20/2016 08:24	WG918050
Bromobenzene	U		1.40	4.95	4950	10/20/2016 08:24	WG918050
Bromodichloromethane	U		1.26	4.95	4950	10/20/2016 08:24	WG918050
Bromoform	U		2.10	4.95	4950	10/20/2016 08:24	WG918050
Bromomethane	U		6.63	24.8	4950	10/20/2016 08:24	WG918050
n-Butylbenzene	31.2		1.28	4.95	4950	10/20/2016 08:24	WG918050
sec-Butylbenzene	14.0		0.995	4.95	4950	10/20/2016 08:24	WG918050
tert-Butylbenzene	U		1.02	4.95	4950	10/20/2016 08:24	WG918050
Carbon disulfide	U		1.09	4.95	4950	10/20/2016 08:24	WG918050
Carbon tetrachloride	U		1.62	4.95	4950	10/20/2016 08:24	WG918050
Chlorobenzene	U		1.05	4.95	4950	10/20/2016 08:24	WG918050
Chlorodibromomethane	U		1.85	4.95	4950	10/20/2016 08:24	WG918050
Chloroethane	U		4.68	24.8	4950	10/20/2016 08:24	WG918050
2-Chloroethyl vinyl ether	U		11.6	248	4950	10/20/2016 08:24	WG918050
Chloroform	U		1.13	24.8	4950	10/20/2016 08:24	WG918050
Chloromethane	U		1.86	12.4	4950	10/20/2016 08:24	WG918050
2-Chlorotoluene	U		1.49	4.95	4950	10/20/2016 08:24	WG918050
4-Chlorotoluene	U		1.19	4.95	4950	10/20/2016 08:24	WG918050
1,2-Dibromo-3-Chloropropane	U		5.20	24.8	4950	10/20/2016 08:24	WG918050
1,2-Dibromoethane	U		1.70	4.95	4950	10/20/2016 08:24	WG918050
Dibromomethane	U		1.89	4.95	4950	10/20/2016 08:24	WG918050
1,2-Dichlorobenzene	U		1.51	4.95	4950	10/20/2016 08:24	WG918050
1,3-Dichlorobenzene	U		1.18	4.95	4950	10/20/2016 08:24	WG918050
1,4-Dichlorobenzene	U		1.12	4.95	4950	10/20/2016 08:24	WG918050
Dichlorodifluoromethane	U		3.53	24.8	4950	10/20/2016 08:24	WG918050
1,1-Dichloroethane	U		0.985	4.95	4950	10/20/2016 08:24	WG918050
1,2-Dichloroethane	U		1.31	4.95	4950	10/20/2016 08:24	WG918050
1,1-Dichloroethene	U		1.50	4.95	4950	10/20/2016 08:24	WG918050
cis-1,2-Dichloroethene	U		1.16	4.95	4950	10/20/2016 08:24	WG918050
trans-1,2-Dichloroethene	U		1.31	4.95	4950	10/20/2016 08:24	WG918050
1,2-Dichloropropane	U		1.77	4.95	4950	10/20/2016 08:24	WG918050

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/13/16 15:54

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloropropene	U		1.57	4.95	4950	10/20/2016 08:24	WG918050
1,3-Dichloropropane	U		1.02	4.95	4950	10/20/2016 08:24	WG918050
cis-1,3-Dichloropropene	U		1.30	4.95	4950	10/20/2016 08:24	WG918050
trans-1,3-Dichloropropene	U		1.32	4.95	4950	10/20/2016 08:24	WG918050
2,2-Dichloropropane	U		1.38	4.95	4950	10/20/2016 08:24	WG918050
Di-isopropyl ether	U		1.23	4.95	4950	10/20/2016 08:24	WG918050
Ethylbenzene	181		1.47	4.95	4950	10/20/2016 08:24	WG918050
Hexachloro-1,3-butadiene	U		1.69	4.95	4950	10/20/2016 08:24	WG918050
Isopropylbenzene	20.0		1.20	4.95	4950	10/20/2016 08:24	WG918050
p-Isopropyltoluene	9.40		1.01	4.95	4950	10/20/2016 08:24	WG918050
2-Butanone (MEK)	U		23.2	49.5	4950	10/20/2016 08:24	WG918050
Methylene Chloride	U		4.95	24.8	4950	10/20/2016 08:24	WG918050
4-Methyl-2-pentanone (MIBK)	U		9.31	49.5	4950	10/20/2016 08:24	WG918050
Methyl tert-butyl ether	U		1.05	4.95	4950	10/20/2016 08:24	WG918050
Naphthalene	135		4.95	24.8	4950	10/20/2016 08:24	WG918050
n-Propylbenzene	83.6		1.02	4.95	4950	10/20/2016 08:24	WG918050
Styrene	1.31	J	1.16	4.95	4950	10/20/2016 08:24	WG918050
1,1,1,2-Tetrachloroethane	U		1.31	4.95	4950	10/20/2016 08:24	WG918050
1,1,2,2-Tetrachloroethane	U		1.81	4.95	4950	10/20/2016 08:24	WG918050
1,1,2-Trichlorotrifluoroethane	U		1.81	4.95	4950	10/20/2016 08:24	WG918050
Tetrachloroethene	33.3		1.37	4.95	4950	10/20/2016 08:24	WG918050
Toluene	525		2.15	24.8	4950	10/20/2016 08:24	WG918050
1,2,3-Trichlorobenzene	U		1.51	4.95	4950	10/20/2016 08:24	WG918050
1,2,4-Trichlorobenzene	U		1.92	4.95	4950	10/20/2016 08:24	WG918050
1,1,1-Trichloroethane	U		1.42	4.95	4950	10/20/2016 08:24	WG918050
1,1,2-Trichloroethane	U		1.37	4.95	4950	10/20/2016 08:24	WG918050
Trichloroethene	U		1.38	4.95	4950	10/20/2016 08:24	WG918050
Trichlorofluoromethane	U		1.89	24.8	4950	10/20/2016 08:24	WG918050
1,2,3-Trichloropropane	U		3.67	12.4	4950	10/20/2016 08:24	WG918050
1,2,4-Trimethylbenzene	471		1.04	4.95	4950	10/20/2016 08:24	WG918050
1,2,3-Trimethylbenzene	110		1.42	4.95	4950	10/20/2016 08:24	WG918050
1,3,5-Trimethylbenzene	148		1.32	4.95	4950	10/20/2016 08:24	WG918050
Vinyl chloride	U		1.44	4.95	4950	10/20/2016 08:24	WG918050
Xylenes, Total	1090		3.46	14.9	4950	10/20/2016 08:24	WG918050
(S) Toluene-d8	102			88.7-115		10/20/2016 08:24	WG918050
(S) Dibromofluoromethane	93.1			76.3-123		10/20/2016 08:24	WG918050
(S) a,a,a-Trifluorotoluene	104			87.2-117		10/20/2016 08:24	WG918050
(S) 4-Bromofluorobenzene	104			69.7-129		10/20/2016 08:24	WG918050

- 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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	234000		33000	100000	25000	10/19/2016 23:18	WG918603
Residual Range Organics (RRO)	645000		82500	250000	25000	10/19/2016 23:18	WG918603
(S) o-Terphenyl	0.000	J7		50.0-150		10/19/2016 23:18	WG918603

Polychlorinated Biphenyls (GC) by Method 8082M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		1.65	5.00	5	10/20/2016 14:19	WG919103
PCB 1221	U		1.65	5.00	5	10/20/2016 14:19	WG919103
PCB 1232	U		1.65	5.00	5	10/20/2016 14:19	WG919103
PCB 1242	U		1.65	5.00	5	10/20/2016 14:19	WG919103
PCB 1248	11.3		1.65	5.00	5	10/20/2016 14:19	WG919103
PCB 1254	U		1.65	5.00	5	10/20/2016 14:19	WG919103



Collected date/time: 10/13/16 15:54

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Polychlorinated Biphenyls (GC) by Method 8082M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
PCB 1260	U		1.65	5.00	5	10/20/2016 14:19	WG919103
(S) Decachlorobiphenyl	83.6		0.330	60.0-140		10/20/2016 14:19	WG919103
(S) Tetrachloro-m-xylene	77.4		0.330	60.0-140		10/20/2016 14:19	WG919103

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	-		10/16/2016 1:05:26 PM	WG917669
TCLP ZHE Extraction	-		10/17/2016 8:18:20 AM	WG917806
Fluid	1		10/16/2016 1:05:26 PM	WG917669
Initial pH	n/a		10/16/2016 1:05:26 PM	WG917669
Final pH	n/a		10/16/2016 1:05:26 PM	WG917669

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
Mercury	ND		0.0100	0.20	1	10/18/2016 14:46	WG918081

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
Arsenic	ND		0.100	5	1	10/17/2016 23:09	WG917894
Barium	ND		0.0500	100	1	10/17/2016 23:09	WG917894
Cadmium	ND		0.0200	1	1	10/17/2016 23:09	WG917894
Chromium	ND		0.100	5	1	10/17/2016 23:09	WG917894
Lead	ND		0.0500	5	1	10/17/2016 23:09	WG917894
Selenium	ND		0.100	1	1	10/17/2016 23:09	WG917894
Silver	ND		0.0500	5	1	10/17/2016 23:09	WG917894

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

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
Benzene	0.522		0.0500	0.50	1	10/18/2016 12:23	WG918118
Carbon tetrachloride	ND		0.0500	0.50	1	10/18/2016 12:23	WG918118
Chlorobenzene	ND		0.0500	100	1	10/18/2016 12:23	WG918118
Chloroform	ND		0.250	6	1	10/18/2016 12:23	WG918118
1,2-Dichloroethane	ND		0.0500	0.50	1	10/18/2016 12:23	WG918118
1,1-Dichloroethene	ND		0.0500	0.70	1	10/18/2016 12:23	WG918118
2-Butanone (MEK)	ND	J3	0.500	200	1	10/18/2016 12:23	WG918118
Tetrachloroethene	0.106		0.0500	0.70	1	10/18/2016 12:23	WG918118
Trichloroethene	ND		0.0500	0.50	1	10/18/2016 12:23	WG918118
Vinyl chloride	ND		0.0500	0.20	1	10/18/2016 12:23	WG918118
(S) Toluene-d8	97.8		90.0-115	114		10/18/2016 12:23	WG918118
(S) Dibromofluoromethane	95.4		79.0-121	125		10/18/2016 12:23	WG918118
(S) a,a,a-Trifluorotoluene	101		90.4-116	114		10/18/2016 12:23	WG918118
(S) 4-Bromofluorobenzene	106		80.1-120	128		10/18/2016 12:23	WG918118

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Polychlorinated Biphenyls (GC) by Method 8082M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		1.65	5.00	5	10/20/2016 14:32	WG919103
PCB 1221	U		1.65	5.00	5	10/20/2016 14:32	WG919103
PCB 1232	U		1.65	5.00	5	10/20/2016 14:32	WG919103
PCB 1242	U		1.65	5.00	5	10/20/2016 14:32	WG919103
PCB 1248	10.9		1.65	5.00	5	10/20/2016 14:32	WG919103
PCB 1254	U		1.65	5.00	5	10/20/2016 14:32	WG919103
PCB 1260	U		1.65	5.00	5	10/20/2016 14:32	WG919103
(S) Decachlorobiphenyl	132		0.330	60.0-140		10/20/2016 14:32	WG919103
(S) Tetrachloro-m-xylene	74.6		0.330	60.0-140		10/20/2016 14:32	WG919103

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/13/16 16:15

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Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		10/16/2016 1:05:26 PM	WG917669
TCLP ZHE Extraction	-		10/17/2016 8:18:20 AM	WG917806
Fluid	1		10/16/2016 1:05:26 PM	WG917669
Initial pH	n/a		10/16/2016 1:05:26 PM	WG917669
Final pH	n/a		10/16/2016 1:05:26 PM	WG917669

1 Cp

2 Tc

3 Ss

4 Cn

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
Mercury	ND		0.0100	0.20	1	10/18/2016 14:49	WG918081

5 Sr

6 Qc

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
Arsenic	ND		0.100	5	1	10/17/2016 23:12	WG917894
Barium	0.0524		0.0500	100	1	10/17/2016 23:12	WG917894
Cadmium	ND		0.0200	1	1	10/17/2016 23:12	WG917894
Chromium	ND		0.100	5	1	10/17/2016 23:12	WG917894
Lead	0.0566	<u>B</u>	0.0500	5	1	10/17/2016 23:12	WG917894
Selenium	ND		0.100	1	1	10/17/2016 23:12	WG917894
Silver	ND		0.0500	5	1	10/17/2016 23:12	WG917894

7 Gl

8 Al

9 Sc

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

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
Benzene	0.650		0.100	0.50	2	10/18/2016 12:44	WG918118
Carbon tetrachloride	ND		0.100	0.50	2	10/18/2016 12:44	WG918118
Chlorobenzene	ND		0.100	100	2	10/18/2016 12:44	WG918118
Chloroform	ND		0.500	6	2	10/18/2016 12:44	WG918118
1,2-Dichloroethane	ND		0.100	0.50	2	10/18/2016 12:44	WG918118
1,1-Dichloroethene	ND		0.100	0.70	2	10/18/2016 12:44	WG918118
2-Butanone (MEK)	ND	<u>J3</u>	1.00	200	2	10/18/2016 12:44	WG918118
Tetrachloroethene	0.204		0.100	0.70	2	10/18/2016 12:44	WG918118
Trichloroethene	ND		0.100	0.50	2	10/18/2016 12:44	WG918118
Vinyl chloride	ND		0.100	0.20	2	10/18/2016 12:44	WG918118
(S) Toluene-d8	97.4		90.0-115	114		10/18/2016 12:44	WG918118
(S) Dibromofluoromethane	96.1		79.0-121	125		10/18/2016 12:44	WG918118
(S) a,a,a-Trifluorotoluene	101		90.4-116	114		10/18/2016 12:44	WG918118
(S) 4-Bromofluorobenzene	102		80.1-120	128		10/18/2016 12:44	WG918118



Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		4.90	20.0	100	10/19/2016 17:26	WG918499

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

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	2900		58.5	90.0	9	10/19/2016 15:03	WG917577
Barium	104		15.3	45.0	9	10/19/2016 15:03	WG917577
Cadmium	11.1	J	6.30	18.0	9	10/19/2016 15:03	WG917577
Chromium	190		12.6	90.0	9	10/19/2016 15:03	WG917577
Lead	55.4		17.1	45.0	9	10/19/2016 15:03	WG917577
Selenium	U		66.6	90.0	9	10/19/2016 15:03	WG917577
Silver	U		25.2	45.0	9	10/19/2016 15:03	WG917577

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	57400	J	20000	100000	2000	10/20/2016 04:39	WG918024
Acrolein	U	J4	17700	100000	2000	10/20/2016 04:39	WG918024
Acrylonitrile	U		3740	20000	2000	10/20/2016 04:39	WG918024
Benzene	1050	J	662	2000	2000	10/20/2016 04:39	WG918024
Bromobenzene	U		704	2000	2000	10/20/2016 04:39	WG918024
Bromodichloromethane	U		760	2000	2000	10/20/2016 04:39	WG918024
Bromoform	U		938	2000	2000	10/20/2016 04:39	WG918024
Bromomethane	U		1730	10000	2000	10/20/2016 04:39	WG918024
n-Butylbenzene	U		722	2000	2000	10/20/2016 04:39	WG918024
sec-Butylbenzene	U		730	2000	2000	10/20/2016 04:39	WG918024
tert-Butylbenzene	U		798	2000	2000	10/20/2016 04:39	WG918024
Carbon disulfide	U		550	2000	2000	10/20/2016 04:39	WG918024
Carbon tetrachloride	U		758	2000	2000	10/20/2016 04:39	WG918024
Chlorobenzene	U		696	2000	2000	10/20/2016 04:39	WG918024
Chlorodibromomethane	U		654	2000	2000	10/20/2016 04:39	WG918024
Chloroethane	U		906	10000	2000	10/20/2016 04:39	WG918024
Chloroform	U		648	10000	2000	10/20/2016 04:39	WG918024
Chloromethane	731	J	552	5000	2000	10/20/2016 04:39	WG918024
2-Chlorotoluene	U		750	2000	2000	10/20/2016 04:39	WG918024
4-Chlorotoluene	U		702	2000	2000	10/20/2016 04:39	WG918024
1,2-Dibromo-3-Chloropropane	U		2660	10000	2000	10/20/2016 04:39	WG918024
1,2-Dibromoethane	U		762	2000	2000	10/20/2016 04:39	WG918024
Dibromomethane	U		692	2000	2000	10/20/2016 04:39	WG918024
1,2-Dichlorobenzene	U		698	2000	2000	10/20/2016 04:39	WG918024
1,3-Dichlorobenzene	U		440	2000	2000	10/20/2016 04:39	WG918024
1,4-Dichlorobenzene	U		548	2000	2000	10/20/2016 04:39	WG918024
Dichlorodifluoromethane	U		1100	10000	2000	10/20/2016 04:39	WG918024
1,1-Dichloroethane	U		518	2000	2000	10/20/2016 04:39	WG918024
1,2-Dichloroethane	U		722	2000	2000	10/20/2016 04:39	WG918024
1,1-Dichloroethene	U		796	2000	2000	10/20/2016 04:39	WG918024
cis-1,2-Dichloroethene	U		520	2000	2000	10/20/2016 04:39	WG918024
trans-1,2-Dichloroethene	U		792	2000	2000	10/20/2016 04:39	WG918024
1,2-Dichloropropane	U		612	2000	2000	10/20/2016 04:39	WG918024
1,1-Dichloropropene	U		704	2000	2000	10/20/2016 04:39	WG918024
1,3-Dichloropropane	U		732	2000	2000	10/20/2016 04:39	WG918024
cis-1,3-Dichloropropene	U		836	2000	2000	10/20/2016 04:39	WG918024
trans-1,3-Dichloropropene	3670		838	2000	2000	10/20/2016 04:39	WG918024
2,2-Dichloropropane	U		642	2000	2000	10/20/2016 04:39	WG918024
Di-isopropyl ether	U		640	2000	2000	10/20/2016 04:39	WG918024



Collected date/time: 10/13/16 16:45

L866261

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Ethylbenzene	U		768	2000	2000	10/20/2016 04:39	WG918024
Hexachloro-1,3-butadiene	U		512	2000	2000	10/20/2016 04:39	WG918024
Isopropylbenzene	U		652	2000	2000	10/20/2016 04:39	WG918024
p-Isopropyltoluene	U		700	2000	2000	10/20/2016 04:39	WG918024
2-Butanone (MEK)	12300	J	7860	20000	2000	10/20/2016 04:39	WG918024
Methylene Chloride	U		2000	10000	2000	10/20/2016 04:39	WG918024
4-Methyl-2-pentanone (MIBK)	U		4280	20000	2000	10/20/2016 04:39	WG918024
Methyl tert-butyl ether	U		734	2000	2000	10/20/2016 04:39	WG918024
Naphthalene	U		2000	10000	2000	10/20/2016 04:39	WG918024
n-Propylbenzene	U		698	2000	2000	10/20/2016 04:39	WG918024
Styrene	U		614	2000	2000	10/20/2016 04:39	WG918024
1,1,1,2-Tetrachloroethane	U		770	2000	2000	10/20/2016 04:39	WG918024
1,1,2,2-Tetrachloroethane	U		260	2000	2000	10/20/2016 04:39	WG918024
1,1,2-Trichlorotrifluoroethane	U		606	2000	2000	10/20/2016 04:39	WG918024
Tetrachloroethene	U		744	2000	2000	10/20/2016 04:39	WG918024
Toluene	3720	J	1560	10000	2000	10/20/2016 04:39	WG918024
1,2,3-Trichlorobenzene	U		460	2000	2000	10/20/2016 04:39	WG918024
1,2,4-Trichlorobenzene	U		710	2000	2000	10/20/2016 04:39	WG918024
1,1,1-Trichloroethane	U		638	2000	2000	10/20/2016 04:39	WG918024
1,1,2-Trichloroethane	U		766	2000	2000	10/20/2016 04:39	WG918024
Trichloroethene	U		796	2000	2000	10/20/2016 04:39	WG918024
Trichlorofluoromethane	U		2400	10000	2000	10/20/2016 04:39	WG918024
1,2,3-Trichloropropane	U		1610	5000	2000	10/20/2016 04:39	WG918024
1,2,4-Trimethylbenzene	U		746	2000	2000	10/20/2016 04:39	WG918024
1,2,3-Trimethylbenzene	U		642	2000	2000	10/20/2016 04:39	WG918024
1,3,5-Trimethylbenzene	U		774	2000	2000	10/20/2016 04:39	WG918024
Vinyl chloride	U		518	2000	2000	10/20/2016 04:39	WG918024
Xylenes, Total	2540	J	2120	6000	2000	10/20/2016 04:39	WG918024
(S) Toluene-d8	104			90.0-115		10/20/2016 04:39	WG918024
(S) Dibromofluoromethane	92.2			79.0-121		10/20/2016 04:39	WG918024
(S) 4-Bromofluorobenzene	100			80.1-120		10/20/2016 04:39	WG918024

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

Sample Narrative:

8260B L866261-07 WG918024: IS/SURR failed on lower dilution.

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
PCB 1016	U		2.00	10.0	20	10/19/2016 14:33	WG917710
PCB 1221	U		1.46	10.0	20	10/19/2016 14:33	WG917710
PCB 1232	U		0.840	10.0	20	10/19/2016 14:33	WG917710
PCB 1242	U		0.940	10.0	20	10/19/2016 14:33	WG917710
PCB 1248	U		1.72	10.0	20	10/19/2016 14:33	WG917710
PCB 1254	U		0.940	10.0	20	10/19/2016 14:33	WG917710
PCB 1260	U		2.40	10.0	20	10/19/2016 14:33	WG917710
(S) Decachlorobiphenyl	75.8			10.0-156		10/19/2016 14:33	WG917710
(S) Tetrachloro-m-xylene	70.2			13.9-137		10/19/2016 14:33	WG917710



Method Blank (MB)

(MB) R3172142-9 10/20/16 14:37

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
TOX	10.9	J	7.88	20.0

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L866261-01 Original Sample (OS) • Duplicate (DUP)

(OS) L866261-01 10/20/16 14:52 • (DUP) R3172142-11 10/20/16 14:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/kg	mg/kg		%		%
TOX	197	183	.92	7.00		20

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

(LCS) R3172142-10 10/20/16 14:43 • (LCSD) R3172142-14 10/20/16 15:25

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
TOX	1000	1010	1020	101	102	85.0-115			1.00	20

L866261-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L866261-03 10/20/16 15:06 • (MS) R3172142-12 10/20/16 15:13 • (MSD) R3172142-13 10/20/16 15:19

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
TOX	1000	181	830	839	73.0	74.0	.89	80.0-120	J6	J6	1.00	20



[L866261-02](#)

L865614-02 Original Sample (OS) • Duplicate (DUP)

(OS) L865614-02 10/18/16 04:45 • (DUP) WG917542-6 10/18/16 04:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	Deg. F	Deg. F		%		%
Ignitability	70.2	70.2	1	0.000		10

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

L866184-01 Original Sample (OS) • Duplicate (DUP)

(OS) L866184-01 10/18/16 04:45 • (DUP) WG917542-7 10/18/16 04:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	Deg. F	Deg. F		%		%
Ignitability	71.6	72.0	1	0.557		10

⁶ Qc

⁷ Gl

⁸ Al

L866261-02 Original Sample (OS) • Duplicate (DUP)

(OS) L866261-02 10/18/16 04:45 • (DUP) WG917542-8 10/18/16 04:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	Deg. F	Deg. F		%		%
Ignitability	160	160	1	0.250		10

⁹ Sc

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

(LCS) WG917542-1 10/18/16 04:45 • (LCSD) WG917542-2 10/18/16 04:45

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	Deg. F	Deg. F	Deg. F	%	%	%			%	%
Ignitability	82.0	82.8	82.6	101	101	93.0-107			0.242	20



Method Blank (MB)

(MB) R3171362-1 10/18/16 13:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.00333	0.0100

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

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

(LCS) R3171362-2 10/18/16 13:17 • (LCSD) R3171362-3 10/18/16 13:20

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	0.0300	0.0332	0.0335	111	112	80-120			1	20

L865291-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L865291-01 10/18/16 13:23 • (MS) R3171362-4 10/18/16 13:32 • (MSD) R3171362-5 10/18/16 13:35

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.0300	ND	0.0337	0.0316	112	105	1	75-125			6	20

⁷Gl

⁸Al

L865800-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L865800-01 10/18/16 13:37 • (MS) R3171362-6 10/18/16 13:40 • (MSD) R3171362-7 10/18/16 13:43

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.0300	ND	0.0337	0.0316	112	105	1	75-125			7	20

⁹Sc



Method Blank (MB)

(MB) R3171808-1 10/19/16 17:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.0490	0.200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

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

(LCS) R3171808-2 10/19/16 17:09 • (LCSD) R3171808-3 10/19/16 17:11

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Mercury	3.00	2.93	2.88	98	96	80-120			2	20

L866454-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L866454-01 10/19/16 17:14 • (MS) R3171808-4 10/19/16 17:16 • (MSD) R3171808-5 10/19/16 17:19

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	3.00	U	2.98	3.01	99	100	1	75-125			1	20

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3171710-1 10/19/16 09:36

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Mercury	U		0.0028	0.0200

1 Cp

2 Tc

3 Ss

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

(LCS) R3171710-2 10/19/16 09:39 • (LCSD) R3171710-3 10/19/16 09:42

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Mercury	0.300	0.269	0.267	90	89	80-120			1	20

4 Cn

5 Sr

L866220-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L866220-10 10/19/16 09:45 • (MS) R3171710-4 10/19/16 09:48 • (MSD) R3171710-5 10/19/16 09:51

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Mercury	0.343	U	0.3	0.278	87	81	1	75-125			8	20

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3171835-1 10/19/16 13:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic	U		6.50	10.0
Barium	U		1.70	5.00
Cadmium	U		0.700	2.00
Chromium	U		1.40	10.0
Lead	U		1.90	5.00
Selenium	U		7.40	10.0
Silver	U		2.80	5.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

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

(LCS) R3171835-2 10/19/16 13:50 • (LCSD) R3171835-3 10/19/16 13:52

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Arsenic	1000	1050	1050	105	105	80-120			1	20
Barium	1000	1070	1060	107	106	80-120			1	20
Cadmium	1000	1050	1040	105	104	80-120			1	20
Chromium	1000	1030	1020	103	102	80-120			1	20
Lead	1000	1040	1030	104	103	80-120			1	20
Selenium	1000	1070	1060	107	106	80-120			1	20
Silver	1000	1050	1050	105	105	80-120			0	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L865846-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L865846-01 10/19/16 14:00 • (MS) R3171835-5 10/19/16 14:05 • (MSD) R3171835-6 10/19/16 14:08

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Arsenic	1000	ND	1080	1080	108	108	1	75-125			0	20
Barium	1000	280	1340	1340	106	106	1	75-125			0	20
Cadmium	1000	ND	1080	1070	108	107	1	75-125			0	20
Chromium	1000	ND	1040	1040	103	103	1	75-125			0	20
Lead	1000	ND	1050	1050	105	105	1	75-125			0	20
Selenium	1000	ND	1100	1090	110	109	1	75-125			0	20
Silver	1000	ND	1070	1070	107	107	1	75-125			0	20



Method Blank (MB)

(MB) R3171161-1 10/17/16 22:13

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Arsenic	U		0.0333	0.100
Barium	U		0.0167	0.0500
Cadmium	U		0.00667	0.0200
Chromium	U		0.0333	0.100
Lead	0.0185	J	0.0167	0.0500
Selenium	U		0.0333	0.100
Silver	U		0.0167	0.0500

- 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) R3171161-2 10/17/16 22:16 • (LCSD) R3171161-3 10/17/16 22:18

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Arsenic	10.0	9.18	9.12	92	91	80-120			1	20
Barium	10.0	9.36	9.31	94	93	80-120			1	20
Cadmium	10.0	9.36	9.30	94	93	80-120			1	20
Chromium	10.0	9.18	9.08	92	91	80-120			1	20
Lead	10.0	9.34	9.31	93	93	80-120			0	20
Selenium	10.0	9.17	9.15	92	92	80-120			0	20
Silver	10.0	9.07	8.98	91	90	80-120			1	20

L865505-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L865505-02 10/17/16 22:21 • (MS) R3171161-5 10/17/16 22:26 • (MSD) R3171161-6 10/17/16 22:29

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Arsenic	10.0	ND	9.28	9.43	93	94	1	75-125			2	20
Barium	10.0	0.301	9.38	9.49	91	92	1	75-125			1	20
Cadmium	10.0	ND	9.36	9.48	94	95	1	75-125			1	20
Chromium	10.0	ND	8.97	9.13	90	91	1	75-125			2	20
Lead	10.0	ND	9.39	9.49	94	95	1	75-125			1	20
Selenium	10.0	ND	9.34	9.46	93	94	1	75-125			1	20
Silver	10.0	ND	9.02	9.15	90	91	1	75-125			1	20



Method Blank (MB)

(MB) R3171479-1 10/18/16 20:18

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.65	2.00
Barium	U		0.17	0.500
Cadmium	U		0.07	0.500
Chromium	U		0.14	1.00
Lead	U		0.19	0.500
Selenium	U		0.74	2.00
Silver	U		0.28	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

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

(LCS) R3171479-2 10/18/16 20:21 • (LCSD) R3171479-3 10/18/16 20:23

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	106	104	106	104	80-120			3	20
Barium	100	108	106	108	106	80-120			3	20
Cadmium	100	106	104	106	104	80-120			2	20
Chromium	100	104	101	104	101	80-120			2	20
Lead	100	106	103	106	103	80-120			2	20
Selenium	100	106	103	106	103	80-120			2	20
Silver	100	106	103	106	103	80-120			2	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L866042-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L866042-02 10/18/16 20:26 • (MS) R3171479-6 10/18/16 20:34 • (MSD) R3171479-7 10/18/16 20:37

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	116	2.56	115	118	97	99	1	75-125			2	20
Barium	116	173	268	265	81	79	1	75-125			1	20
Cadmium	116	0.182	115	115	98	99	1	75-125			1	20
Chromium	116	11.4	110	113	85	87	1	75-125			2	20
Lead	116	6.15	116	118	94	96	1	75-125			2	20
Selenium	116	U	109	112	94	97	1	75-125			3	20
Silver	116	U	118	118	101	102	1	75-125			1	20



Method Blank (MB)

(MB) R3171743-3 10/18/16 07:58

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		10.0	50.0
Acrolein	U		8.87	50.0
Acrylonitrile	U		1.87	10.0
Benzene	U		0.331	1.00
Bromobenzene	U		0.352	1.00
Bromodichloromethane	U		0.380	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
n-Butylbenzene	U		0.361	1.00
sec-Butylbenzene	U		0.365	1.00
tert-Butylbenzene	U		0.399	1.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
2-Chlorotoluene	U		0.375	1.00
4-Chlorotoluene	U		0.351	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
Dibromomethane	U		0.346	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
1,1-Dichloropropene	U		0.352	1.00
1,3-Dichloropropane	U		0.366	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
2,2-Dichloropropane	U		0.321	1.00
Di-isopropyl ether	U		0.320	1.00
Ethylbenzene	U		0.384	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3171743-3 10/18/16 07:58

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Hexachloro-1,3-butadiene	U		0.256	1.00
Isopropylbenzene	U		0.326	1.00
p-Isopropyltoluene	U		0.350	1.00
2-Butanone (MEK)	U		3.93	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.349	1.00
Styrene	U		0.307	1.00
1,1,1,2-Tetrachloroethane	U		0.385	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00
Toluene	U		0.780	5.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
1,2,3-Trichloropropane	U		0.807	2.50
1,2,3-Trimethylbenzene	U		0.321	1.00
1,2,4-Trimethylbenzene	U		0.373	1.00
1,3,5-Trimethylbenzene	U		0.387	1.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	101			90.0-115
(S) Dibromofluoromethane	91.1			79.0-121
(S) 4-Bromofluorobenzene	101			80.1-120

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) R3171743-1 10/18/16 06:26 • (LCSD) R3171743-2 10/18/16 06:49

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Acetone	125	98.1	83.6	78.5	66.9	28.7-175			15.9	20.9
Acrolein	125	46.1	46.7	36.9	37.3	40.4-172	J4	J4	1.21	20
Acrylonitrile	125	156	153	125	122	58.2-145			1.92	20



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

(LCS) R3171743-1 10/18/16 06:26 • (LCSD) R3171743-2 10/18/16 06:49

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	24.6	24.1	98.5	96.4	73.0-122			2.07	20
Bromobenzene	25.0	25.4	25.1	102	100	81.5-115			1.07	20
Bromodichloromethane	25.0	25.7	25.9	103	104	75.5-121			0.670	20
Bromoform	25.0	26.5	26.2	106	105	71.5-131			1.25	20
Bromomethane	25.0	14.6	13.6	58.5	54.4	22.4-187			7.43	20
n-Butylbenzene	25.0	29.4	28.7	118	115	75.9-134			2.37	20
sec-Butylbenzene	25.0	26.7	26.5	107	106	80.6-126			0.990	20
tert-Butylbenzene	25.0	26.5	26.1	106	104	79.3-127			1.88	20
Carbon disulfide	25.0	23.7	23.3	94.6	93.1	53.0-134			1.62	20
Carbon tetrachloride	25.0	22.7	22.2	90.9	88.6	70.9-129			2.50	20
Chlorobenzene	25.0	25.4	25.7	102	103	79.7-122			0.960	20
Chlorodibromomethane	25.0	25.9	25.7	104	103	78.2-124			0.960	20
Chloroethane	25.0	19.2	18.2	76.6	72.8	41.2-153			5.08	20
Chloroform	25.0	24.0	23.7	95.9	94.9	73.2-125			1.05	20
Chloromethane	25.0	25.4	24.9	102	99.7	55.8-134			1.76	20
2-Chlorotoluene	25.0	25.6	25.7	102	103	76.4-125			0.460	20
4-Chlorotoluene	25.0	26.0	25.9	104	104	81.5-121			0.250	20
1,2-Dibromo-3-Chloropropane	25.0	27.4	29.0	110	116	64.8-131			5.55	20
1,2-Dibromoethane	25.0	27.3	27.7	109	111	79.8-122			1.61	20
Dibromomethane	25.0	27.4	26.9	110	108	79.5-118			1.76	20
1,2-Dichlorobenzene	25.0	27.5	26.7	110	107	84.7-118			3.01	20
1,3-Dichlorobenzene	25.0	25.0	24.9	99.8	99.7	77.6-127			0.170	20
1,4-Dichlorobenzene	25.0	25.0	24.6	99.9	98.4	82.2-114			1.50	20
Dichlorodifluoromethane	25.0	33.3	32.6	133	130	56.0-134			2.18	20
1,1-Dichloroethane	25.0	25.4	25.0	102	100	71.7-127			1.40	20
1,2-Dichloroethane	25.0	23.8	23.7	95.4	94.9	65.3-126			0.460	20
1,1-Dichloroethene	25.0	25.1	24.4	100	97.8	59.9-137			2.71	20
cis-1,2-Dichloroethene	25.0	24.4	23.5	97.8	93.9	77.3-122			4.07	20
trans-1,2-Dichloroethene	25.0	25.5	25.0	102	100	72.6-125			1.86	20
1,2-Dichloropropane	25.0	28.3	27.5	113	110	77.4-125			2.85	20
1,1-Dichloropropene	25.0	25.8	25.5	103	102	72.5-127			1.38	20
1,3-Dichloropropane	25.0	27.7	27.8	111	111	80.6-115			0.100	20
cis-1,3-Dichloropropene	25.0	27.2	26.5	109	106	77.7-124			2.33	20
trans-1,3-Dichloropropene	25.0	28.3	27.6	113	110	73.5-127			2.55	20
2,2-Dichloropropane	25.0	24.4	23.7	97.7	94.9	61.3-134			2.90	20
Di-isopropyl ether	25.0	25.7	24.9	103	99.8	65.1-135			3.07	20
Ethylbenzene	25.0	25.4	25.4	101	101	80.9-121			0.0500	20
Hexachloro-1,3-butadiene	25.0	31.5	31.6	126	126	73.7-133			0.200	20
Isopropylbenzene	25.0	25.6	25.4	102	101	81.6-124			0.960	20
p-Isopropyltoluene	25.0	27.6	27.3	110	109	77.6-129			0.920	20

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) R3171743-1 10/18/16 06:26 • (LCSD) R3171743-2 10/18/16 06:49

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Butanone (MEK)	125	178	187	143	149	46.4-155			4.75	20
Methylene Chloride	25.0	23.5	23.0	93.9	92.1	69.5-120			1.89	20
4-Methyl-2-pentanone (MIBK)	125	138	138	110	111	63.3-138			0.240	20
Methyl tert-butyl ether	25.0	24.8	24.3	99.2	97.1	70.1-125			2.16	20
Naphthalene	25.0	30.2	30.1	121	120	69.7-134			0.370	20
n-Propylbenzene	25.0	26.7	26.4	107	106	81.9-122			0.820	20
Styrene	25.0	26.1	26.1	105	104	79.9-124			0.0700	20
1,1,1,2-Tetrachloroethane	25.0	26.3	26.5	105	106	78.5-125			0.900	20
1,1,2,2-Tetrachloroethane	25.0	27.0	27.2	108	109	79.3-123			0.740	20
Tetrachloroethene	25.0	26.5	25.5	106	102	73.5-130			3.96	20
Toluene	25.0	25.3	24.6	101	98.5	77.9-116			2.55	20
1,1,2-Trichlorotrifluoroethane	25.0	25.6	24.7	102	98.8	62.0-141			3.64	20
1,2,3-Trichlorobenzene	25.0	31.4	30.8	126	123	75.7-134			2.01	20
1,2,4-Trichlorobenzene	25.0	30.3	29.8	121	119	76.1-136			1.57	20
1,1,1-Trichloroethane	25.0	24.3	23.9	97.0	95.5	71.1-129			1.64	20
1,1,2-Trichloroethane	25.0	25.9	25.7	104	103	81.6-120			0.730	20
Trichloroethene	25.0	25.7	25.1	103	100	79.5-121			2.51	20
Trichlorofluoromethane	25.0	23.1	22.3	92.3	89.4	49.1-157			3.26	20
1,2,3-Trichloropropane	25.0	27.4	27.4	110	110	74.9-124			0.0500	20
1,2,3-Trimethylbenzene	25.0	26.1	25.5	104	102	79.9-118			2.16	20
1,2,4-Trimethylbenzene	25.0	26.0	25.8	104	103	79.0-122			0.870	20
1,3,5-Trimethylbenzene	25.0	25.4	25.4	101	101	81.0-123			0.0300	20
Vinyl chloride	25.0	24.0	23.6	95.8	94.2	61.5-134			1.70	20
Xylenes, Total	75.0	76.4	75.6	102	101	79.2-122			1.01	20
(S) Toluene-d8				101	100	90.0-115				
(S) Dibromofluoromethane				91.1	91.5	79.0-121				
(S) 4-Bromofluorobenzene				100	101	80.1-120				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L865903-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L865903-01 10/18/16 12:28 • (MS) R3171743-4 10/18/16 12:51 • (MSD) R3171743-5 10/18/16 13:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	125	988	2940	2790	156	144	10	25.0-156			5.26	21.5
Acrolein	125	ND	1170	780	93.8	62.4	10	34.0-194		J3	40.2	21.5
Acrylonitrile	125	ND	1600	1590	128	127	10	55.9-161			0.790	20
Benzene	25.0	ND	249	244	99.7	97.6	10	58.6-133			2.12	20
Bromobenzene	25.0	ND	265	258	106	103	10	70.6-125			2.39	20
Bromodichloromethane	25.0	ND	267	252	107	101	10	69.2-127			5.60	20



L865903-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L865903-01 10/18/16 12:28 • (MS) R3171743-4 10/18/16 12:51 • (MSD) R3171743-5 10/18/16 13:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromoform	25.0	ND	267	253	107	101	10	66.3-140			5.58	20
Bromomethane	25.0	ND	46.2	42.3	18.5	16.9	10	16.6-183			8.86	20.5
n-Butylbenzene	25.0	ND	304	287	122	115	10	64.8-145			5.68	20
sec-Butylbenzene	25.0	ND	286	270	114	108	10	66.8-139			5.87	20
tert-Butylbenzene	25.0	ND	286	271	114	108	10	67.1-138			5.19	20
Carbon disulfide	25.0	ND	234	223	93.5	89.1	10	34.9-138			4.81	20
Carbon tetrachloride	25.0	ND	209	196	83.7	78.5	10	60.6-139			6.50	20
Chlorobenzene	25.0	ND	292	286	117	114	10	70.1-130			2.06	20
Chlorodibromomethane	25.0	ND	278	267	111	107	10	71.6-132			3.86	20
Chloroethane	25.0	ND	202	194	80.6	77.7	10	33.3-155			3.67	20
Chloroform	25.0	ND	246	242	98.3	96.6	10	66.1-133			1.67	20
Chloromethane	25.0	ND	620	592	248	237	10	40.7-139	J5	J5	4.51	20
2-Chlorotoluene	25.0	ND	269	261	107	105	10	66.9-134			2.71	20
4-Chlorotoluene	25.0	ND	275	263	110	105	10	66.8-134			4.58	20
1,2-Dibromo-3-Chloropropane	25.0	ND	401	405	160	162	10	63.9-142	J5	J5	1.08	20.2
1,2-Dibromoethane	25.0	ND	321	312	129	125	10	73.8-131			2.88	20
Dibromomethane	25.0	ND	298	285	119	114	10	72.8-127			4.21	20
1,2-Dichlorobenzene	25.0	ND	295	289	118	115	10	77.4-127			2.04	20
1,3-Dichlorobenzene	25.0	ND	280	267	112	107	10	67.9-136			4.47	20
1,4-Dichlorobenzene	25.0	ND	272	266	109	106	10	74.4-123			2.08	20
Dichlorodifluoromethane	25.0	ND	323	304	129	122	10	42.2-146			5.77	20
1,1-Dichloroethane	25.0	ND	249	245	99.5	98.0	10	64.0-134			1.54	20
1,2-Dichloroethane	25.0	ND	232	225	92.7	89.9	10	60.7-132			3.06	20
1,1-Dichloroethene	25.0	ND	268	261	107	104	10	48.8-144			2.90	20
cis-1,2-Dichloroethene	25.0	ND	247	239	98.6	95.8	10	60.6-136			2.95	20
trans-1,2-Dichloroethene	25.0	ND	259	256	104	103	10	61.0-132			1.10	20
1,2-Dichloropropane	25.0	ND	285	280	114	112	10	69.7-130			1.98	20
1,1-Dichloropropene	25.0	ND	257	251	103	100	10	61.5-136			2.42	20
1,3-Dichloropropane	25.0	ND	306	294	122	118	10	74.3-123			3.85	20
cis-1,3-Dichloropropene	25.0	ND	280	269	112	108	10	71.1-129			4.18	20
trans-1,3-Dichloropropene	25.0	ND	287	274	115	110	10	66.3-136			4.48	20
2,2-Dichloropropane	25.0	ND	231	221	92.6	88.6	10	54.9-142			4.45	20
Di-isopropyl ether	25.0	ND	237	234	94.9	93.4	10	59.9-140			1.59	20
Ethylbenzene	25.0	ND	283	279	113	112	10	62.7-136			1.58	20
Hexachloro-1,3-butadiene	25.0	ND	393	380	157	152	10	61.1-144	J5	J5	3.43	20.1
Isopropylbenzene	25.0	ND	274	266	109	107	10	67.4-136			2.65	20
p-Isopropyltoluene	25.0	ND	303	283	121	113	10	62.8-143			6.58	20
2-Butanone (MEK)	125	ND	2050	1970	164	157	10	45.0-156	J5	J5	3.91	20.8
Methylene Chloride	25.0	ND	240	238	96.1	95.1	10	61.5-125			1.04	20
4-Methyl-2-pentanone (MIBK)	125	ND	1750	1670	140	133	10	60.7-150			5.03	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



L865903-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L865903-01 10/18/16 12:28 • (MS) R3171743-4 10/18/16 12:51 • (MSD) R3171743-5 10/18/16 13:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methyl tert-butyl ether	25.0	ND	243	238	97.1	95.1	10	61.4-136			2.09	20
Naphthalene	25.0	ND	374	368	150	147	10	61.8-143	J5	J5	1.70	20
n-Propylbenzene	25.0	ND	278	267	111	107	10	63.2-139			4.15	20
Styrene	25.0	ND	295	291	118	116	10	68.2-133			1.24	20
1,1,1,2-Tetrachloroethane	25.0	ND	288	277	115	111	10	70.5-132			3.71	20
1,1,2,2-Tetrachloroethane	25.0	ND	321	305	128	122	10	64.9-145			5.09	20
Tetrachloroethene	25.0	ND	311	293	124	117	10	57.4-141			5.72	20
Toluene	25.0	ND	274	264	109	106	10	67.8-124			3.54	20
1,1,2-Trichlorotrifluoroethane	25.0	ND	263	252	105	101	10	53.7-150			4.35	20
1,2,3-Trichlorobenzene	25.0	ND	358	346	143	138	10	65.7-143			3.23	20
1,2,4-Trichlorobenzene	25.0	ND	354	339	142	136	10	67.0-146			4.37	20
1,1,1-Trichloroethane	25.0	ND	242	235	96.9	93.9	10	58.7-134			3.14	20
1,1,2-Trichloroethane	25.0	ND	294	285	118	114	10	74.1-130			2.90	20
Trichloroethene	25.0	ND	289	277	115	111	10	48.9-148			3.95	20
Trichlorofluoromethane	25.0	ND	234	224	93.7	89.6	10	39.9-165			4.53	20
1,2,3-Trichloropropane	25.0	ND	339	321	136	129	10	71.5-134	J5		5.29	20
1,2,3-Trimethylbenzene	25.0	ND	281	271	110	106	10	62.7-133			3.73	20
1,2,4-Trimethylbenzene	25.0	ND	291	273	113	106	10	60.5-137			6.35	20
1,3,5-Trimethylbenzene	25.0	ND	276	261	111	104	10	67.9-134			5.76	20
Vinyl chloride	25.0	ND	250	238	99.9	95.4	10	44.3-143			4.58	20
Xylenes, Total	75.0	ND	838	817	112	109	10	65.6-133			2.57	20
(S) Toluene-d8					98.8	98.9		90.0-115				
(S) Dibromofluoromethane					86.4	87.8		79.0-121				
(S) 4-Bromofluorobenzene					98.7	100		80.1-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3172067-4 10/20/16 00:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0100	0.0500
Acrylonitrile	U		0.00179	0.0100
Benzene	U		0.000270	0.00100
Bromobenzene	U		0.000284	0.00100
Bromodichloromethane	U		0.000254	0.00100
Bromoform	U		0.000424	0.00100
Bromomethane	U		0.00134	0.00500
n-Butylbenzene	U		0.000258	0.00100
sec-Butylbenzene	U		0.000201	0.00100
tert-Butylbenzene	U		0.000206	0.00100
Carbon disulfide	U		0.000221	0.00100
Carbon tetrachloride	U		0.000328	0.00100
Chlorobenzene	U		0.000212	0.00100
Chlorodibromomethane	U		0.000373	0.00100
Chloroethane	U		0.000946	0.00500
2-Chloroethyl vinyl ether	U		0.00234	0.0500
Chloroform	U		0.000229	0.00500
Chloromethane	U		0.000375	0.00250
2-Chlorotoluene	U		0.000301	0.00100
4-Chlorotoluene	U		0.000240	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00105	0.00500
1,2-Dibromoethane	U		0.000343	0.00100
Dibromomethane	U		0.000382	0.00100
1,2-Dichlorobenzene	U		0.000305	0.00100
1,3-Dichlorobenzene	U		0.000239	0.00100
1,4-Dichlorobenzene	U		0.000226	0.00100
Dichlorodifluoromethane	U		0.000713	0.00500
1,1-Dichloroethane	U		0.000199	0.00100
1,2-Dichloroethane	U		0.000265	0.00100
1,1-Dichloroethene	U		0.000303	0.00100
cis-1,2-Dichloroethene	U		0.000235	0.00100
trans-1,2-Dichloroethene	U		0.000264	0.00100
1,2-Dichloropropane	U		0.000358	0.00100
1,1-Dichloropropene	U		0.000317	0.00100
1,3-Dichloropropane	U		0.000207	0.00100
cis-1,3-Dichloropropene	U		0.000262	0.00100
trans-1,3-Dichloropropene	U		0.000267	0.00100
2,2-Dichloropropane	U		0.000279	0.00100
Di-isopropyl ether	U		0.000248	0.00100
Ethylbenzene	U		0.000297	0.00100

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3172067-4 10/20/16 00:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Hexachloro-1,3-butadiene	U		0.000342	0.00100
Isopropylbenzene	U		0.000243	0.00100
p-Isopropyltoluene	U		0.000204	0.00100
2-Butanone (MEK)	U		0.00468	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00188	0.0100
Methyl tert-butyl ether	U		0.000212	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000206	0.00100
Styrene	U		0.000234	0.00100
1,1,1,2-Tetrachloroethane	U		0.000264	0.00100
1,1,2,2-Tetrachloroethane	U		0.000365	0.00100
Tetrachloroethene	U		0.000276	0.00100
Toluene	U		0.000434	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000365	0.00100
1,2,3-Trichlorobenzene	U		0.000306	0.00100
1,2,4-Trichlorobenzene	U		0.000388	0.00100
1,1,1-Trichloroethane	U		0.000286	0.00100
1,1,2-Trichloroethane	U		0.000277	0.00100
Trichloroethene	U		0.000279	0.00100
Trichlorofluoromethane	U		0.000382	0.00500
1,2,3-Trichloropropane	U		0.000741	0.00250
1,2,3-Trimethylbenzene	U		0.000287	0.00100
1,2,4-Trimethylbenzene	U		0.000211	0.00100
1,3,5-Trimethylbenzene	U		0.000266	0.00100
Vinyl chloride	U		0.000291	0.00100
Xylenes, Total	U		0.000698	0.00300
(S) Toluene-d8	102			88.7-115
(S) Dibromofluoromethane	96.5			76.3-123
(S) a,a,a-Trifluorotoluene	104			87.2-117
(S) 4-Bromofluorobenzene	106			69.7-129

- 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) R3172067-1 10/19/16 22:49 • (LCSD) R3172067-2 10/19/16 23:09

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 %
Acetone	0.125	0.112	0.121	89.7	96.8	25.3-178			7.61	22.9
Acrylonitrile	0.125	0.107	0.112	85.9	89.6	57.8-143			4.19	20



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

(LCS) R3172067-1 10/19/16 22:49 • (LCSD) R3172067-2 10/19/16 23:09

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 %
Benzene	0.0250	0.0229	0.0245	91.7	98.0	72.6-120			6.61	20
Bromobenzene	0.0250	0.0232	0.0253	92.8	101	80.3-115			8.51	20
Bromodichloromethane	0.0250	0.0236	0.0251	94.3	100	75.3-119			6.27	20
Bromoform	0.0250	0.0260	0.0281	104	112	69.1-135			7.75	20
Bromomethane	0.0250	0.0248	0.0248	99.0	99.1	23.0-191			0.110	20
n-Butylbenzene	0.0250	0.0201	0.0239	80.2	95.7	74.2-134			17.6	20
sec-Butylbenzene	0.0250	0.0231	0.0258	92.3	103	77.8-129			11.0	20
tert-Butylbenzene	0.0250	0.0242	0.0264	96.7	106	77.2-129			8.87	20
Carbon disulfide	0.0250	0.0233	0.0252	93.1	101	49.9-136			7.83	20
Carbon tetrachloride	0.0250	0.0200	0.0237	79.8	94.8	69.4-129			17.2	20
Chlorobenzene	0.0250	0.0243	0.0268	97.3	107	78.9-122			9.51	20
Chlorodibromomethane	0.0250	0.0263	0.0282	105	113	76.4-126			6.83	20
Chloroethane	0.0250	0.0243	0.0248	97.3	99.0	47.2-147			1.72	20
2-Chloroethyl vinyl ether	0.125	0.113	0.124	90.4	98.9	16.7-162			8.91	23.7
Chloroform	0.0250	0.0233	0.0244	93.1	97.5	73.3-122			4.61	20
Chloromethane	0.0250	0.0218	0.0220	87.2	88.2	53.1-135			1.14	20
2-Chlorotoluene	0.0250	0.0229	0.0254	91.4	102	74.6-127			10.7	20
4-Chlorotoluene	0.0250	0.0228	0.0257	91.3	103	79.5-123			11.7	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0229	0.0242	91.7	96.6	64.9-131			5.18	20
1,2-Dibromoethane	0.0250	0.0246	0.0269	98.3	108	78.7-123			9.20	20
Dibromomethane	0.0250	0.0235	0.0253	94.0	101	78.5-117			7.47	20
1,2-Dichlorobenzene	0.0250	0.0232	0.0257	92.8	103	83.6-119			10.3	20
1,3-Dichlorobenzene	0.0250	0.0232	0.0259	92.7	103	75.9-129			11.0	20
1,4-Dichlorobenzene	0.0250	0.0216	0.0246	86.4	98.3	81.0-115			12.9	20
Dichlorodifluoromethane	0.0250	0.0247	0.0223	98.9	89.2	50.9-139			10.3	20
1,1-Dichloroethane	0.0250	0.0229	0.0241	91.5	96.3	71.7-125			5.09	20
1,2-Dichloroethane	0.0250	0.0225	0.0237	90.1	94.9	67.2-121			5.21	20
1,1-Dichloroethene	0.0250	0.0239	0.0257	95.4	103	60.6-133			7.46	20
cis-1,2-Dichloroethene	0.0250	0.0239	0.0254	95.4	102	76.1-121			6.46	20
trans-1,2-Dichloroethene	0.0250	0.0235	0.0250	94.2	99.9	70.7-124			5.90	20
1,2-Dichloropropane	0.0250	0.0233	0.0254	93.1	101	76.9-123			8.60	20
1,1-Dichloropropene	0.0250	0.0223	0.0242	89.2	96.9	71.2-126			8.30	20
1,3-Dichloropropane	0.0250	0.0240	0.0262	95.8	105	80.3-114			8.95	20
cis-1,3-Dichloropropene	0.0250	0.0234	0.0258	93.4	103	77.3-123			10.1	20
trans-1,3-Dichloropropene	0.0250	0.0226	0.0249	90.3	99.6	73.0-127			9.83	20
2,2-Dichloropropane	0.0250	0.0196	0.0222	78.3	88.8	61.9-132			12.5	20
Di-isopropyl ether	0.0250	0.0221	0.0228	88.4	91.4	67.2-131			3.27	20
Ethylbenzene	0.0250	0.0238	0.0261	95.1	104	78.6-124			9.33	20
Hexachloro-1,3-butadiene	0.0250	0.0214	0.0253	85.6	101	69.2-136			16.7	20
Isopropylbenzene	0.0250	0.0236	0.0261	94.6	105	79.4-126			10.0	20

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) R3172067-1 10/19/16 22:49 • (LCSD) R3172067-2 10/19/16 23:09

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 %
p-Isopropyltoluene	0.0250	0.0235	0.0270	94.1	108	75.4-132			13.7	20
2-Butanone (MEK)	0.125	0.101	0.110	81.2	88.4	44.5-154			8.50	21.3
Methylene Chloride	0.0250	0.0230	0.0241	92.0	96.6	68.2-119			4.79	20
4-Methyl-2-pentanone (MIBK)	0.125	0.103	0.112	82.6	89.4	61.1-138			7.91	20
Methyl tert-butyl ether	0.0250	0.0235	0.0242	94.1	96.9	70.2-122			2.93	20
Naphthalene	0.0250	0.0219	0.0240	87.5	96.0	69.9-132			9.30	20
n-Propylbenzene	0.0250	0.0228	0.0257	91.0	103	80.2-124			12.0	20
Styrene	0.0250	0.0250	0.0272	99.8	109	79.4-124			8.72	20
1,1,1,2-Tetrachloroethane	0.0250	0.0250	0.0272	99.9	109	76.7-127			8.45	20
1,1,2,2-Tetrachloroethane	0.0250	0.0213	0.0242	85.2	96.9	78.8-124			12.8	20
Tetrachloroethene	0.0250	0.0247	0.0274	98.6	110	71.1-133			10.6	20
Toluene	0.0250	0.0226	0.0246	90.5	98.3	76.7-116			8.28	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0254	0.0267	101	107	62.6-138			5.34	20
1,2,3-Trichlorobenzene	0.0250	0.0215	0.0246	86.0	98.4	72.5-137			13.4	20
1,2,4-Trichlorobenzene	0.0250	0.0206	0.0246	82.6	98.2	74.0-137			17.3	20
1,1,1-Trichloroethane	0.0250	0.0219	0.0237	87.5	94.7	69.9-127			7.89	20
1,1,2-Trichloroethane	0.0250	0.0242	0.0260	96.9	104	81.9-119			7.05	20
Trichloroethene	0.0250	0.0245	0.0257	97.8	103	77.2-122			4.99	20
Trichlorofluoromethane	0.0250	0.0238	0.0243	95.1	97.0	51.5-151			2.02	20
1,2,3-Trichloropropane	0.0250	0.0239	0.0256	95.7	102	74.0-124			6.78	20
1,2,3-Trimethylbenzene	0.0250	0.0224	0.0247	89.5	98.7	79.4-118			9.78	20
1,2,4-Trimethylbenzene	0.0250	0.0231	0.0256	92.4	102	77.1-124			10.2	20
1,3,5-Trimethylbenzene	0.0250	0.0234	0.0261	93.6	104	79.0-125			10.9	20
Vinyl chloride	0.0250	0.0229	0.0231	91.6	92.5	58.4-134			0.970	20
Xylenes, Total	0.0750	0.0710	0.0788	94.7	105	78.1-123			10.4	20
(S) Toluene-d8				101	101	88.7-115				
(S) Dibromofluoromethane				96.4	95.9	76.3-123				
(S) a,a,a-Trifluorotoluene				101	101	87.2-117				
(S) 4-Bromofluorobenzene				101	100	69.7-129				

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

L865891-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L865891-21 10/20/16 02:56 • (MS) R3172067-5 10/20/16 00:54 • (MSD) R3172067-6 10/20/16 01:14

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 %
Acetone	0.125	ND	0.0718	0.0739	57.4	59.1	1	10.0-130			2.81	31.5
Acrylonitrile	0.125	ND	0.107	0.108	85.7	86.0	1	39.3-152			0.380	27.2
Benzene	0.0250	ND	0.0186	0.0173	74.3	69.3	1	47.8-131			6.97	22.8
Bromobenzene	0.0250	ND	0.0170	0.0146	68.0	58.4	1	40.0-130			15.1	27.4



L865891-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L865891-21 10/20/16 02:56 • (MS) R3172067-5 10/20/16 00:54 • (MSD) R3172067-6 10/20/16 01:14

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 %
Bromodichloromethane	0.0250	ND	0.0191	0.0171	76.5	68.4	1	50.6-128			11.3	22.8
Bromoform	0.0250	ND	0.0228	0.0202	91.2	80.9	1	43.3-139			11.9	25.9
Bromomethane	0.0250	ND	0.0139	0.0133	55.6	53.1	1	5.00-189			4.65	26.7
n-Butylbenzene	0.0250	ND	0.0156	0.0131	62.5	52.5	1	23.6-146			17.5	39.2
sec-Butylbenzene	0.0250	ND	0.0168	0.0145	67.2	57.9	1	31.0-142			14.8	34.7
tert-Butylbenzene	0.0250	ND	0.0175	0.0154	70.0	61.4	1	36.9-142			13.1	31.7
Carbon disulfide	0.0250	0.00358	0.0123	0.0120	34.8	33.6	1	21.2-135			2.61	23.8
Carbon tetrachloride	0.0250	ND	0.0154	0.0148	61.7	59.2	1	46.0-140			4.11	27.2
Chlorobenzene	0.0250	ND	0.0182	0.0160	72.6	64.0	1	44.1-134			12.7	25.7
Chlorodibromomethane	0.0250	ND	0.0215	0.0193	86.0	77.3	1	49.7-134			10.6	24
Chloroethane	0.0250	ND	0.0168	0.0158	67.1	63.4	1	5.00-164			5.70	28.4
2-Chloroethyl vinyl ether	0.125	ND	ND	ND	0.000	0.000	1	5.00-159	J6	J6	0.000	40
Chloroform	0.0250	ND	0.0182	0.0170	70.6	65.9	1	51.2-133			6.67	22.8
Chloromethane	0.0250	ND	0.0112	0.0113	45.0	45.3	1	31.4-141			0.740	24.6
2-Chlorotoluene	0.0250	ND	0.0168	0.0144	67.4	57.8	1	36.1-137			15.4	28.9
4-Chlorotoluene	0.0250	ND	0.0167	0.0140	66.8	56.1	1	35.4-137			17.3	29.8
1,2-Dibromo-3-Chloropropane	0.0250	ND	0.0247	0.0227	98.8	90.9	1	40.4-138			8.30	30.8
1,2-Dibromoethane	0.0250	ND	0.0211	0.0188	84.5	75.2	1	50.2-133			11.6	23.6
Dibromomethane	0.0250	ND	0.0202	0.0180	80.7	71.9	1	52.4-128			11.6	23
1,2-Dichlorobenzene	0.0250	ND	0.0177	0.0145	70.6	58.0	1	34.6-139			19.5	29.9
1,3-Dichlorobenzene	0.0250	ND	0.0170	0.0138	67.9	55.2	1	28.4-142			20.5	31.2
1,4-Dichlorobenzene	0.0250	ND	0.0168	0.0137	67.1	54.7	1	35.0-133			20.3	31.1
Dichlorodifluoromethane	0.0250	ND	0.0164	0.0147	65.6	59.0	1	31.2-144			10.6	30.2
1,1-Dichloroethane	0.0250	ND	0.0176	0.0167	70.5	66.8	1	49.1-136			5.38	22.9
1,2-Dichloroethane	0.0250	ND	0.0186	0.0171	74.5	68.2	1	47.1-129			8.72	22.7
1,1-Dichloroethene	0.0250	ND	0.0171	0.0165	66.3	63.8	1	36.1-142			3.73	25.6
cis-1,2-Dichloroethene	0.0250	0.0323	0.0184	0.0173	0.000	0.000	1	50.6-133	J6	J6	6.05	23
trans-1,2-Dichloroethene	0.0250	ND	0.0164	0.0156	63.3	60.0	1	43.8-135			5.03	24.8
1,2-Dichloropropane	0.0250	ND	0.0190	0.0173	76.0	69.0	1	50.3-134			9.69	22.7
1,1-Dichloropropene	0.0250	ND	0.0168	0.0160	67.2	63.9	1	43.0-137			5.06	26.4
1,3-Dichloropropane	0.0250	ND	0.0205	0.0182	82.0	72.8	1	51.4-127			11.9	23.1
cis-1,3-Dichloropropene	0.0250	ND	0.0197	0.0175	79.0	70.2	1	48.4-134			11.8	23.6
trans-1,3-Dichloropropene	0.0250	ND	0.0186	0.0150	74.5	60.2	1	46.6-135			21.2	25.3
2,2-Dichloropropane	0.0250	ND	0.0168	0.0160	67.0	64.2	1	45.2-141			4.41	26.6
Di-isopropyl ether	0.0250	ND	0.0176	0.0160	70.4	64.2	1	46.7-140			9.33	23.5
Ethylbenzene	0.0250	ND	0.0189	0.0170	75.4	67.9	1	44.8-135			10.5	26.9
Hexachloro-1,3-butadiene	0.0250	ND	0.0144	0.0122	57.6	48.7	1	10.0-149			16.8	40
Isopropylbenzene	0.0250	ND	0.0179	0.0159	71.5	63.5	1	41.9-139			11.8	29.3
p-Isopropyltoluene	0.0250	ND	0.0177	0.0149	71.0	59.7	1	27.3-146			17.3	35.1
2-Butanone (MEK)	0.125	ND	0.0798	0.0792	63.8	63.4	1	23.9-170			0.680	28.3

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



L865891-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L865891-21 10/20/16 02:56 • (MS) R3172067-5 10/20/16 00:54 • (MSD) R3172067-6 10/20/16 01:14

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 %
Methylene Chloride	0.0250	ND	0.0175	0.0162	69.8	64.6	1	46.7-125			7.77	22.2
4-Methyl-2-pentanone (MIBK)	0.125	ND	0.118	0.111	94.6	88.7	1	42.4-146			6.51	26.7
Methyl tert-butyl ether	0.0250	ND	0.0208	0.0187	83.2	74.7	1	50.4-131			10.7	24.8
Naphthalene	0.0250	ND	0.0178	0.0141	71.0	56.4	1	18.4-145			23.0	34
n-Propylbenzene	0.0250	ND	0.0172	0.0149	68.8	59.6	1	35.2-139			14.2	31.9
Styrene	0.0250	ND	0.0181	0.0152	72.4	60.8	1	39.7-137			17.4	28.2
1,1,1,2-Tetrachloroethane	0.0250	ND	0.0189	0.0166	75.8	66.5	1	48.8-136			13.0	25.5
1,1,2,2-Tetrachloroethane	0.0250	ND	0.0218	0.0195	87.3	77.9	1	45.7-140			11.3	26.4
Tetrachloroethene	0.0250	2.51	0.797	1.16	0.000	0.000	1	37.7-140	<u>E V</u>	<u>E J3 V</u>	37.0	29.2
Toluene	0.0250	ND	0.0210	0.0192	84.2	76.9	1	47.8-127			9.02	24.3
1,1,2-Trichlorotrifluoroethane	0.0250	ND	0.0199	0.0193	79.8	77.1	1	35.7-146			3.45	28.8
1,2,3-Trichlorobenzene	0.0250	ND	0.0147	0.0110	58.8	44.1	1	10.0-150			28.6	38.5
1,2,4-Trichlorobenzene	0.0250	ND	0.0151	0.0115	60.5	45.9	1	10.0-153			27.5	39.3
1,1,1-Trichloroethane	0.0250	ND	0.0175	0.0168	70.2	67.3	1	49.0-138			4.19	25.3
1,1,2-Trichloroethane	0.0250	ND	0.0213	0.0185	85.2	74.2	1	52.3-132			13.9	23.4
Trichloroethene	0.0250	0.0957	0.0192	0.0188	0.000	0.000	1	48.0-132	<u>J6</u>	<u>J6</u>	1.94	24.8
Trichlorofluoromethane	0.0250	ND	0.0173	0.0170	69.2	67.9	1	12.8-169			2.00	29.7
1,2,3-Trichloropropane	0.0250	ND	0.0231	0.0212	92.4	84.6	1	44.4-138			8.82	26.3
1,2,3-Trimethylbenzene	0.0250	ND	0.0174	0.0148	69.7	59.4	1	41.0-133			16.0	27.6
1,2,4-Trimethylbenzene	0.0250	ND	0.0178	0.0151	71.1	60.3	1	32.9-139			16.4	30.6
1,3,5-Trimethylbenzene	0.0250	ND	0.0174	0.0150	69.7	59.9	1	37.1-138			15.2	30.6
Vinyl chloride	0.0250	ND	0.0161	0.0147	64.2	58.8	1	32.0-146			8.74	26.3
Xylenes, Total	0.0750	ND	0.0548	0.0488	73.1	65.1	1	42.7-135			11.6	26.6
(S) Toluene-d8					102	101		88.7-115				
(S) Dibromofluoromethane					97.6	99.6		76.3-123				
(S) a,a,a-Trifluorotoluene					101	99.4		87.2-117				
(S) 4-Bromofluorobenzene					97.5	96.5		69.7-129				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3171289-3 10/18/16 10:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0167	0.0500
Carbon tetrachloride	U		0.0167	0.0500
Chlorobenzene	U		0.0167	0.0500
Chloroform	U		0.0833	0.250
1,2-Dichloroethane	U		0.0167	0.0500
1,1-Dichloroethene	U		0.0167	0.0500
2-Butanone (MEK)	U		0.167	0.500
Tetrachloroethene	U		0.0167	0.0500
Trichloroethene	U		0.0167	0.0500
Vinyl chloride	U		0.0167	0.0500
(S) Toluene-d8	97.3			90.0-115
(S) Dibromofluoromethane	95.1			79.0-121
(S) a,a,a-Trifluorotoluene	99.3			90.4-116
(S) 4-Bromofluorobenzene	103			80.1-120

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) R3171289-1 10/18/16 08:10 • (LCSD) R3171289-2 10/18/16 08:31

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 %
Benzene	0.0250	0.0209	0.0234	83.4	93.6	73.0-122			11.5	20
Carbon tetrachloride	0.0250	0.0247	0.0242	98.8	96.7	70.9-129			2.08	20
Chlorobenzene	0.0250	0.0234	0.0259	93.7	103	79.7-122			9.89	20
Chloroform	0.0250	0.0217	0.0241	86.7	96.4	73.2-125			10.7	20
1,2-Dichloroethane	0.0250	0.0200	0.0224	79.8	89.4	65.3-126			11.3	20
1,1-Dichloroethene	0.0250	0.0257	0.0276	103	111	60.6-133			7.44	20
2-Butanone (MEK)	0.125	0.102	0.126	81.9	101	46.4-155		J3	20.8	20
Tetrachloroethene	0.0250	0.0249	0.0275	99.8	110	73.5-130			9.73	20
Trichloroethene	0.0250	0.0232	0.0252	92.7	101	79.5-121			8.25	20
Vinyl chloride	0.0250	0.0242	0.0263	96.6	105	61.5-134			8.50	20
(S) Toluene-d8				99.6	99.7	90.0-115				
(S) Dibromofluoromethane				95.6	97.1	79.0-121				
(S) a,a,a-Trifluorotoluene				102	101	90.4-116				
(S) 4-Bromofluorobenzene				102	102	80.1-120				



L866461-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L866461-02 10/18/16 13:24 • (MS) R3171289-4 10/18/16 13:45 • (MSD) R3171289-5 10/18/16 14:05

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 %
Benzene	1.25	ND	1.16	0.857	93.1	68.5	1	58.6-133		J3	30.4	20
Carbon tetrachloride	1.25	ND	1.34	0.867	107	69.4	1	60.6-139		J3	43.1	20
Chlorobenzene	1.25	ND	1.33	0.945	106	75.6	1	70.1-130		J3	33.5	20
Chloroform	1.25	ND	1.22	0.872	97.3	69.8	1	66.1-133		J3	32.9	20
1,2-Dichloroethane	1.25	ND	1.15	0.803	92.2	64.2	1	60.7-132		J3	35.8	20
1,1-Dichloroethene	1.25	ND	1.27	0.944	102	75.5	1	48.8-144		J3	29.4	20
2-Butanone (MEK)	6.25	ND	5.05	3.34	80.8	53.4	1	45.0-156		J3	40.9	20.8
Tetrachloroethene	1.25	ND	1.41	0.976	113	78.1	1	57.4-141		J3	36.7	20
Trichloroethene	1.25	ND	1.25	0.925	99.6	73.6	1	48.9-148		J3	29.8	20
Vinyl chloride	1.25	ND	1.31	0.959	105	76.8	1	44.3-143		J3	30.6	20
(S) Toluene-d8					98.7	99.3		90.0-115				
(S) Dibromofluoromethane					98.5	97.5		79.0-121				
(S) a,a,a-Trifluorotoluene					101	102		90.4-116				
(S) 4-Bromofluorobenzene					104	102		80.1-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L865940-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L865940-02 10/18/16 11:42 • (MS) R3171289-6 10/18/16 14:26 • (MSD) R3171289-7 10/18/16 14:46

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 %
Benzene	1.25	ND	1.20	1.20	94.9	94.5	1	58.6-133			0.350	20
Carbon tetrachloride	1.25	ND	1.25	1.24	100	98.9	1	60.6-139			1.37	20
Chlorobenzene	1.25	ND	1.39	1.33	111	106	1	70.1-130			4.49	20
Chloroform	1.25	ND	1.24	1.22	99.2	97.4	1	66.1-133			1.86	20
1,2-Dichloroethane	1.25	ND	1.15	1.16	91.8	92.9	1	60.7-132			1.18	20
1,1-Dichloroethene	1.25	ND	1.31	1.30	105	104	1	48.8-144			0.420	20
2-Butanone (MEK)	6.25	ND	6.58	6.54	105	105	1	45.0-156			0.690	20.8
Tetrachloroethene	1.25	ND	1.51	1.45	121	116	1	57.4-141			4.08	20
Trichloroethene	1.25	ND	1.31	1.27	105	102	1	48.9-148			2.65	20
Vinyl chloride	1.25	ND	1.35	1.32	108	106	1	44.3-143			1.97	20
(S) Toluene-d8					99.9	99.7		90.0-115				
(S) Dibromofluoromethane					96.7	97.5		79.0-121				
(S) a,a,a-Trifluorotoluene					102	102		90.4-116				
(S) 4-Bromofluorobenzene					103	102		80.1-120				



Method Blank (MB)

(MB) R3171951-1 10/19/16 22:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Diesel Range Organics (DRO)	U		333	1000
Residual Range Organics (RRO)	U		833	2500
<i>(S) o-Terphenyl</i>	140			50.0-150

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

(LCS) R3171951-2 10/19/16 22:27 • (LCSD) R3171951-3 10/19/16 22:43

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Diesel Range Organics (DRO)	5000	5490	5570	110	111	50.0-150			1.50	20
Residual Range Organics (RRO)	5000	4530	4640	90.7	92.8	50.0-150			2.32	20
<i>(S) o-Terphenyl</i>				92.1	90.2	50.0-150				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3171643-1 10/19/16 09:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
PCB 1260	U		0.120	0.500
PCB 1016	U		0.100	0.500
PCB 1221	U		0.0730	0.500
PCB 1232	U		0.0420	0.500
PCB 1242	U		0.0470	0.500
PCB 1248	U		0.0860	0.500
PCB 1254	U		0.0470	0.500
(S) Decachlorobiphenyl	73.4			10.0-156
(S) Tetrachloro-m-xylene	66.2			13.9-137

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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

(LCS) R3171643-2 10/19/16 10:00 • (LCSD) R3171643-3 10/19/16 10:12

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
PCB 1260	2.50	2.33	2.22	93.1	88.9	47.7-149			4.59	28.8
PCB 1016	2.50	1.94	1.92	77.8	76.7	24.7-128			1.38	34.9
(S) Decachlorobiphenyl				88.3	84.8	10.0-156				
(S) Tetrachloro-m-xylene				68.7	67.7	13.9-137				

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3172108-1 10/20/16 12:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
PCB 1260	U		0.330	1.00
PCB 1016	U		0.330	1.00
PCB 1221	U		0.330	1.00
PCB 1232	U		0.330	1.00
PCB 1242	U		0.330	1.00
PCB 1248	U		0.330	1.00
PCB 1254	U		0.330	1.00
(S) Decachlorobiphenyl	113			60.0-140
(S) Tetrachloro-m-xylene	106			60.0-140

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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

(LCS) R3172108-2 10/20/16 12:53 • (LCSD) R3172108-3 10/20/16 13:05

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	0.500	0.575	0.581	115	116	60.0-140			1.12	20
PCB 1016	0.500	0.542	0.547	108	109	60.0-140			0.790	20
(S) Decachlorobiphenyl				113	119	60.0-140				
(S) Tetrachloro-m-xylene				110	116	60.0-140				

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
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.
(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.
Rec.	Recovery.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
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.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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



ESC Lab Sciences 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.



State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ¹⁴	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

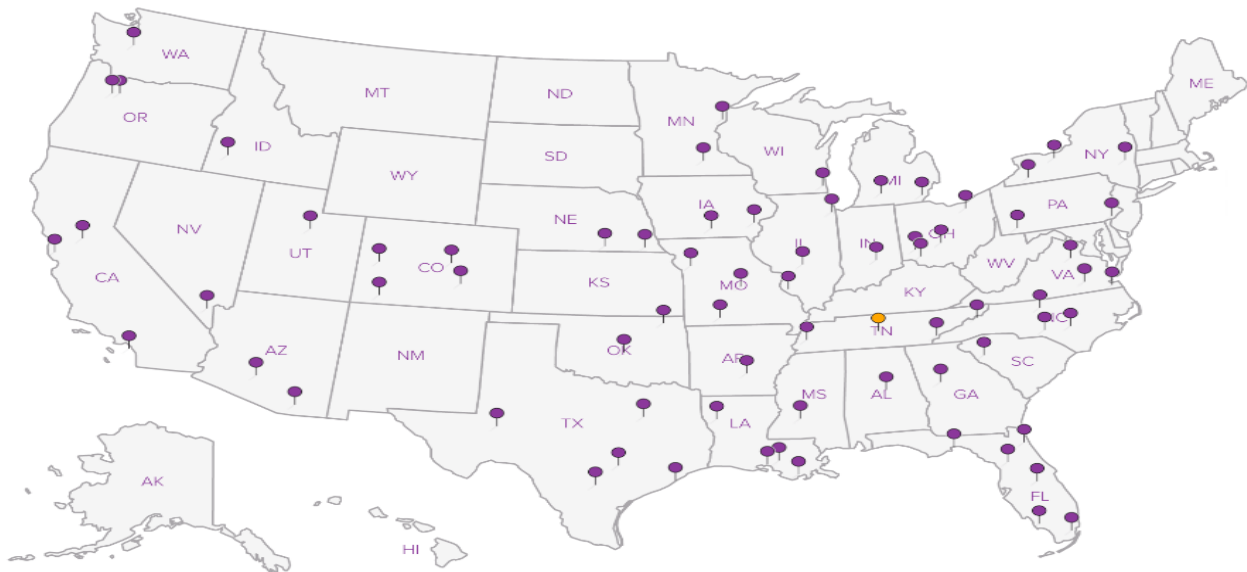
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

Our Locations

ESC Lab Sciences 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. **ESC Lab Sciences performs all testing at our central laboratory.**



State of Oregon Chain of Custody

Agency, Authorized Purchaser or Agent: Oregon Department of Environmental Quality Laboratory and Environmental Assessment Division	Contract Laboratory Name: Environmental Science Corporation (ESC)	Lab Selection Criteria: <input type="checkbox"/> Proximity (if TAT < 48 hrs) <input type="checkbox"/> Prior work on same project <input checked="" type="checkbox"/> Cost (for anticipated analyses) <input type="checkbox"/> Other labs disqualified or unable to perform requested services <input checked="" type="checkbox"/> Emergency work	Turn Around Time: <input type="checkbox"/> 10 days (std.) <input type="checkbox"/> 5 days <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/> 48 hours <input type="checkbox"/> 24 hours <input checked="" type="checkbox"/> Other Standard Per State Contract
Send Lab Report To: Sarah Rockwell Laurey Cook Address: Oregon DEQ-LEAD 3150 NW 229 th , Suite 150 Hillsboro, OR 97125 Tel. #: 503-693-5775 E-mail: Rockwell.Sarah@deq.state.or.us COOK.Laurey@deq.state.or.us	Lab Batch #: D181 Invoice To: 10-046 DEQ Business Office Address: 811 SW 6 th Ave. Portland, OR 97204 Tel. #: 503-229-5269		

Project Name: APES Tank 12				Sample Preservative										866 261
Project #: _____				none	none	none	none	none	HNO3	HCl	none	none		
Sampler Name: NRC				Requested Analyses										
Sample ID#	Collection Date/Time	Matrix	Number of Containers	TCLP RCRA 8	TCLP RCRA VOCs	NWTPH-Dx	NWTPH-Gx	TOX	RCRA 8	8260B VOCs	8082 PCBs	Closed Cup Flashpoint	Comments	
Tank - Top	10/13/16 1444	Gil	3	X	X	X		X	X	X	X	X	-01/07	
Tank - 6D	10/13/16 1505			X	X	X		X	X	X	X	X	ON HOLD SK	
Tank - 12D	10/13/16 1525			X	X	X		X	X	X	X	X	ON HOLD SK	
Tank - 18D	10/13/16 1554			X	X	X		X	X	X	X	X	HOLD SK -03/04	
Tank - 18D Duplicate	10/13/16 1615			X	X						X		-05/06-09-03	
Tank - 24D	10/13/16 1645	Water	6						X	X	X		-07-08-09	
Tripblank	10/13/16	Water	1										ON HOLD SK	
				Invoice: Customer: Phone: Sat Del: Y		Date: 18Dec15 Weight: 10 LBS COD: DV:		Shipping: 0.00 Special: 0.00 Handling: 0.00 Total: 0.00						
				Svcs: PRIORITY OVERNIGHT TRACK: 6617 3601 3822										

Notes: Include Premium EDD

Relinquished By: <i>Melanie Miller</i>	Agency/Agent: <i>ODEQ</i>	Received By: _____	Agency/Agent: _____
Signature: <i>[Signature]</i>	Time & Date: <i>10/14/16 11:00am</i>	Signature: _____	Time & Date: _____
Relinquished By: _____	Agency/Agent: _____	Received By: <i>Timiesha Scott</i>	Agency/Agent: _____
Signature: _____	Time & Date: _____	Signature: <i>[Signature]</i>	Time & Date: <i>10-15-16</i>

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # [8903]. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S & C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.

2.40
SK
JD11

SUBCONTRACT ORDER

DEQ Laboratory and Environmental Assessment Div.

1610094

1806261

SENDING LABORATORY:

DEQ Laboratory and Environmental Assessment Div.
 3150 NW 229th Suite 150
 Hillsboro, OR 97124-6536
 Phone: 503.693.5700
 Fax: 503.693.4999

Project Manager: Sarah Rockwell

RECEIVING LABORATORY:

ESC Lab Sciences
 12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 Phone: (800) 767-5858
 Fax: (615) 758-5859

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: 1610094-01 Non-Aqu Sampled: 13-Oct-16 14:44				
Subcontract - Ignitability	14-Nov-16 17:00	10-Nov-16 14:44		closed cup
Subcontract - Mercury by 7471.14	14-Nov-16 17:00	10-Nov-16 14:44		
Subcontract - Metals by 6010B	14-Nov-16 17:00	11-Apr-17 14:44		RCRA 7
Subcontract - Metals RCRA8 T14	14-Nov-16 17:00	11-Apr-17 14:44		
Subcontract - PCBs by 8082	26-Nov-16 17:00	13-Oct-17 14:44		
Subcontract - Total Organic Hall	14-Nov-16 17:00	10-Nov-16 14:44		
Subcontract - Volatiles by GCM14	14-Nov-16 17:00	27-Oct-16 14:44		
Subcontract - Volatiles TCLP	14-Nov-16 17:00	27-Oct-16 14:44		
Subcontract - Diesel Range Org	14-Nov-16 17:00	20-Oct-16 14:44		
<i>Containers Supplied:</i>				
Glass Jar, 8 oz. (A)	Glass Jar, 8 oz. (B)	Glass Jar, 16 oz. (C)		
Sample ID: 1610094-04 Non-Aqu Sampled: 13-Oct-16 15:54				
Subcontract - Volatiles by GCM14	14-Nov-16 17:00	27-Oct-16 15:54		
Subcontract - Diesel Range Org	14-Nov-16 17:00	20-Oct-16 15:54		closed cup
Subcontract - Ignitability	14-Nov-16 17:00	10-Nov-16 15:54		
Subcontract - Mercury by 7471.14	14-Nov-16 17:00	10-Nov-16 15:54		
Subcontract - Metals by 6010B	14-Nov-16 17:00	11-Apr-17 15:54		RCRA 7
Subcontract - Metals RCRA8 T14	14-Nov-16 17:00	11-Apr-17 15:54		
Subcontract - Volatiles TCLP	14-Nov-16 17:00	27-Oct-16 15:54		
Subcontract - PCBs by 8082	26-Nov-16 17:00	13-Oct-17 15:54		
Subcontract - Total Organic Hall	14-Nov-16 17:00	10-Nov-16 15:54		
<i>Containers Supplied:</i>				
Glass Jar, 8 oz. (A)	Glass Jar, 8 oz. (B)	Glass Jar, 16 oz. (C)		

Released By	Date	Received By	Date
Released By	Date	Received By	Date



Cooler Receipt Form

Client: <u>ORFGONDOT</u>	SDG#	<u>6806261</u>		
Cooler Received/Opened On: <u>10-15-16</u>	Temperature Upon Receipt:	<u>2.4 °C</u>		
Received By: <u>Timiesha Scott</u>				
Signature: <u>[Signature]</u>				
Receipt Check List		Yes	No	N/A
Were custody seals on outside of cooler and intact?				<input checked="" type="checkbox"/>
Were custody papers properly filled out?		<input checked="" type="checkbox"/>		
Did all bottles arrive in good condition?		<input checked="" type="checkbox"/>		
Were correct bottles used for the analyses requested?		<input checked="" type="checkbox"/>		
Was sufficient amount of sample sent in each bottle?		<input checked="" type="checkbox"/>		
Were all applicable sample containers correctly preserved and checked for preservation? (Any not in accepted range noted on COC)				
If applicable, was an observable VOA headspace present?			<input checked="" type="checkbox"/>	
Non Conformance Generated. (If yes see attached NCF)				

SUBCONTRACT ORDER

DEQ Laboratory and Environmental Assessment Div.

1610094

SENDING LABORATORY:

DEQ Laboratory and Environmental Assessment Div.
3150 NW 229th Suite 150
Hillsboro, OR 97124-6536
Phone: 503.693.5700
Fax: 503.693.4999
Project Manager: Sarah Rockwell

RECEIVING LABORATORY:

ESC Lab Sciences
12065 Lebanon Rd.
Mt. Juliet, TN 37122
Phone : (800) 767-5858
Fax: (615) 758-5859

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: 1610094-01	Non-Aque	Sampled: 13-Oct-16 14:44		
Subcontract - Ignitability	14-Nov-16 17:00	10-Nov-16 14:44		closed cup
Subcontract - Mercury by 7471A	14-Nov-16 17:00	10-Nov-16 14:44		
Subcontract - Metals by 6010B	14-Nov-16 17:00	11-Apr-17 14:44		RCRA 7
Subcontract - Metals RCRA8 TCLP	14-Nov-16 17:00	11-Apr-17 14:44		
Subcontract - PCBs by 8082	26-Nov-16 17:00	13-Oct-17 14:44		
Subcontract - Total Organic Halides	14-Nov-16 17:00	10-Nov-16 14:44		
Subcontract - Volatiles by GCMS 82	14-Nov-16 17:00	27-Oct-16 14:44		
Subcontract - Volatiles TCLP	14-Nov-16 17:00	27-Oct-16 14:44		
Subcontract - Diesel Range Organic	14-Nov-16 17:00	20-Oct-16 14:44		
<i>Containers Supplied:</i>				
Glass Jar, 8 oz. (A)	Glass Jar, 8 oz. (B)	Glass Jar, 16 oz. (C)		
Sample ID: 1610094-04	Non-Aque	Sampled: 13-Oct-16 15:54		
Subcontract - Metals RCRA8 TCLP	14-Nov-16 17:00	11-Apr-17 15:54		
Subcontract - Diesel Range Organic	14-Nov-16 17:00	20-Oct-16 15:54		
Subcontract - Metals by 6010B	14-Nov-16 17:00	11-Apr-17 15:54		RCRA 7
Subcontract - PCBs by 8082	26-Nov-16 17:00	13-Oct-17 15:54		
Subcontract - Total Organic Halides	14-Nov-16 17:00	10-Nov-16 15:54		
Subcontract - Volatiles by GCMS 82	14-Nov-16 17:00	27-Oct-16 15:54		
Subcontract - Volatiles TCLP	14-Nov-16 17:00	27-Oct-16 15:54		
Subcontract - Mercury by 7471A	14-Nov-16 17:00	10-Nov-16 15:54		
<i>Containers Supplied:</i>				
Glass Jar, 8 oz. (A)	Glass Jar, 8 oz. (B)	Glass Jar, 16 oz. (C)		
Sample ID: 1610094-05	Non-Aque	Sampled: 13-Oct-16 16:15		
Subcontract - Metals RCRA8 TCLP	14-Nov-16 17:00	11-Apr-17 16:15		
Subcontract - PCBs by 8082	26-Nov-16 17:00	13-Oct-17 16:15		
Subcontract - Volatiles TCLP	14-Nov-16 17:00	27-Oct-16 16:15		
<i>Containers Supplied:</i>				
Glass Jar, 8 oz. (A)	Glass Jar, 8 oz. (B)	Glass Jar, 16 oz. (C)		

Released By	Date	Received By	Date
Released By	Date	Received By	Date

SUBCONTRACT ORDER

DEQ Laboratory and Environmental Assessment Div.

1610094

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: 1610094-06	Water::LA	Sampled: 13-Oct-16 16:45		
Subcontract - Volatiles by GCMS 8214	14-Nov-16 17:00	27-Oct-16 16:45		
Subcontract - Mercury by 7471A	14-Nov-16 17:00	10-Nov-16 16:45		
Subcontract - Metals by 6010B	14-Nov-16 17:00	11-Apr-17 16:45		RCRA 7
Subcontract - PCBs by 8082	26-Nov-16 17:00	13-Oct-17 16:45		
<i>Containers Supplied:</i>				
Poly 500mL; HNO3 (A)	AG, 125mL (B)	AG, 125mL (C)	VOA Vial, 40mL; HCL (D)	VOA Vial, 40mL; HCL (E)
VOA Vial, 40mL; HCL (F)				

Released By	Date	Received By	Date
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Released By	Date	Received By	Date
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