

11 December 2018

Mr. Ken Thiessen
Oregon Department of Environmental Quality
Northwest Region
700 NE Multnomah Street, Suite 600
Portland, OR 97232-4100

Subject: BOP70ds Well Decommissioning – No-Longer Contains Determination Request
East Multnomah County Troutdale Sandstone Aquifer Remedy (ECSI No. 1479)
Fairview, Oregon

Dear Ken:

Geosyntec Consultants, Inc. (Geosyntec) has prepared this letter on behalf of Cascade Corporation (Cascade) to request a “No-Longer Contains Determination” for investigation derived waste (IDW) generated as part well decommissioning activities for the East Multnomah County (EMC) Troutdale Sandstone Aquifer (TSA) remedy Site. The decommissioned well, BOP-70(ds), was a triple-nested well (i.e. three screen depths) located in NE 185th Drive, just north of Sandy Boulevard in Gresham, Oregon (Figure 1). The IDW currently is located at the Cascade remediation property with the address 2525 NE 201st Ave, Gresham, Oregon.

SITE HISTORY AND BACKGROUND

Following remedial investigations conducted from 1988 to 1994, contaminants of concern (COCs) identified for the TSA Site included volatile organic compounds (VOCs) in groundwater. Active groundwater remediation with extraction wells (pump and treat) began in the late 1980s and is ongoing and has been successful in treating the groundwater. VOC contamination in the TSA includes trichloroethene (TCE), tetrachloroethene (PCE), and cis-1,2-dichloroethene (cis-1,2-DCE). Monitoring well BOP-70(ds) was installed in 2007 as a nested well with three screened intervals [BOP-70(ds)-215, BOP-70(ds)-245, and BOP-70(ds)-275]. The 215-foot depth interval was used for TSA monitoring purposes from 2007 through 2014, and trace levels of VOCs (TCE only) were detected in groundwater only two times (0.5 and 0.62 micrograms per liter in April and August 2007, respectively).

Due to significant plume contraction, monitoring well BOP-70(ds) was no longer needed and proposed for decommissioning in the 2015 Annual Report (Geosyntec, Landau Associates, and SSPA, 2016). A Work Plan describing proposed decommissioning activities was submitted to

DEQ on 2 April 2018 (Geosyntec, 2018), and DEQ approved the decommissioning on 22 May 2018.

DECOMMISSIONING INVESTIGATION DERIVED WASTE

Monitoring well BOP-70(ds) was decommissioned on 23-30 October 2018 by overdrilling using a mud-rotary drilling rig operated by Cascade Drilling LLP. The mud system utilized for the work was a polymer-based slurry. Used mud was filtered and reused as possible, and waste/used mud was placed into 10 cubic yard soil bins. Additional information documenting the decommissioning activities will be provided in the forthcoming 2018 EMC TSA Annual Report.

IDW generated during the decommissioning process consisted of the used drilling mud, sand filter pack, well materials (PVC casing and screen), and the monitoring well monument and cement pad. The IDW was placed into three lined and covered 10 cubic yard soil bins, which were transported to the Cascade remediation site for staging until off-site disposal. One bin contains well materials and monument, and two bins contain a mixture of well filter pack, drilling mud, and some soil cuttings from the decommissioning.

Three multi-part composite samples were obtained on 13 November 2018 from the two bins with soil/mud IDW and submitted for analytical testing of VOCs by U.S. Environmental Protection Agency (EPA) Method 8260B, metals by EPA Method 6010B, Mercury by EPA Method 7471A, and Total Solids by Method 2540 G-2011. Metals testing was required by the landfill (Waste Management) for disposal, and since metals are not Site COCs they are not further discussed herein.

IDW TESTING RESULTS

VOCs were not detected in the six soil samples collected from the soil bins. A copy of the analytical report is provided in Attachment A.

DISCUSSION

Potentially applicable waste codes that could apply to this waste would be F001 or F002, for waste related to historical parts degreasing using TCE at the Cascade facility.

Based on the analytical results, VOCs including TCE were not detected in the IDW. These results are expected since soil was not directly contaminated by VOCs historically. Rather, groundwater contaminated with VOCs migrated into and through the TSA. Only trace levels of TCE were detected in groundwater during two monitoring events in 2007 at the BOP-70(ds) well.

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Based on the analytical results for the soil IDW samples, we request that DEQ make a “No-longer Contains Determination” for the soil IDW. Following DEQ’s review and approval, the soil bin will be transported to an off-site, permitted facility for disposal of the IDW. The IDW currently is planned to be disposed at the Waste Management Hillsboro Landfill in Hillsboro, Oregon.

CLOSURE

Please contact us at (503) 222-9518 with any questions regarding this No Longer Contains Determination request letter, or if you need additional information to support this request.

Sincerely,

Geosyntec Consultants, Inc.



Cindy Bartlett, R.G.
Senior Geologist/Project Manager

ATTACHMENTS:

Figure 1	Location of Decommissioned Monitoring Wells
Attachment A	Analytical Laboratory Report

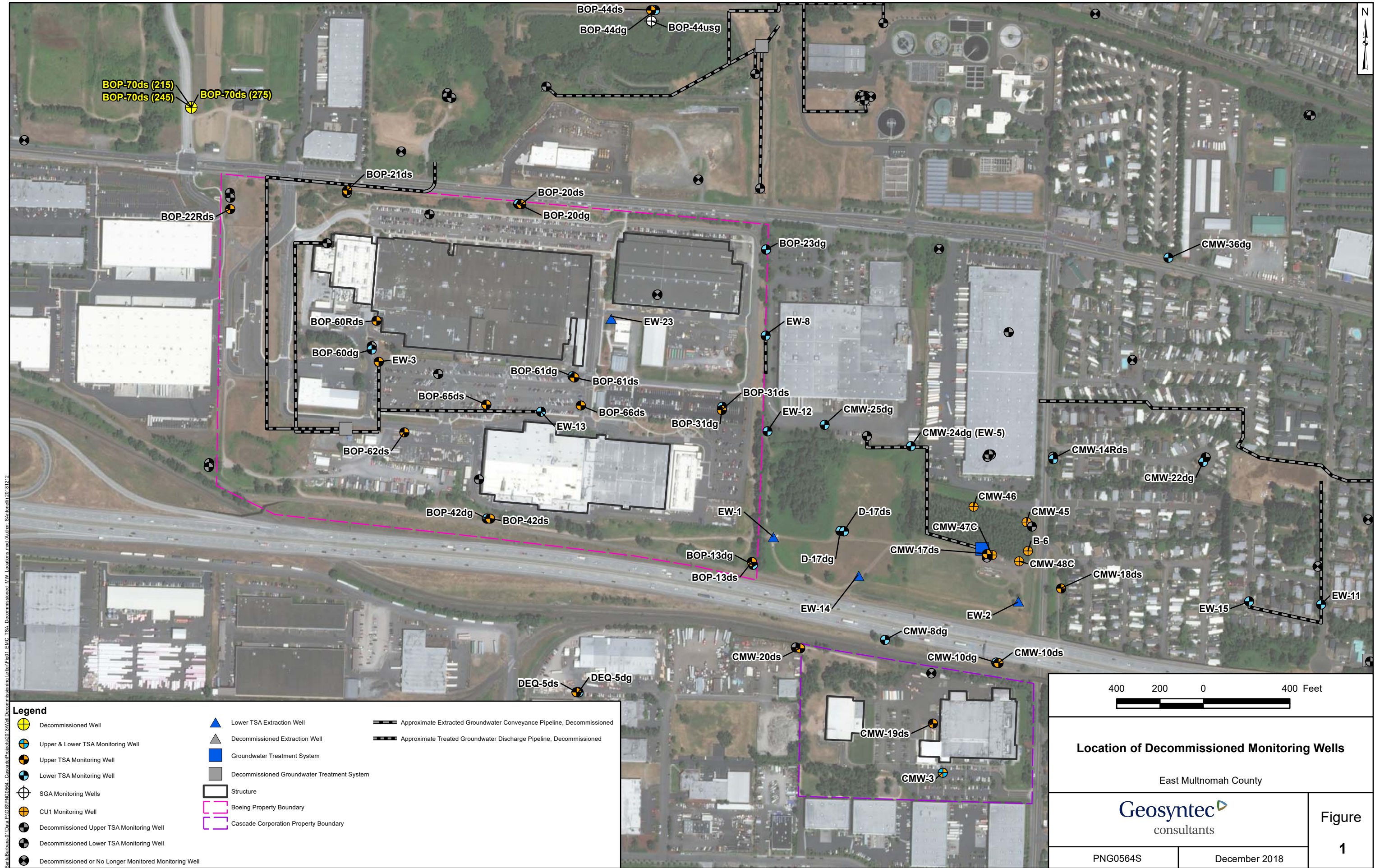
REFERENCES

Geosyntec Consultants, Landau Associates, and SSPA, 2016. 2015 Annual Performance Report: 1 October 2014 Through 31 December 2015, Troutdale Sandstone Aquifer Remedy, East Multnomah County, Oregon. 29 February 2016.

Geosyntec Consultants, 2018. Revised Well Decommissioning Work Plan, East Multnomah County Troutdale Sandstone Aquifer Remedy, Fairview, Oregon, ECSI No. 1479. 2 April 2018.

Oregon Department of Environmental Quality (DEQ), 2018. Email from Ken Thiessen, DEQ, RE: Revised Well Decommissioning Work Plan, East Multnomah County Troutdale Sandstone Aquifer Remedy, Fairview, Oregon. ECSI #1479; Approval of Abandonment of Three Wells (BOP-70ds, BOP-71ds, and RPW-1ds).

FIGURE



ATTACHMENT A

Analytical Laboratory Report

November 20, 2018

Cascade Corporation- Fairview, OR

Sample Delivery Group: L1044392

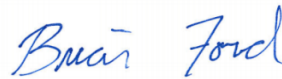
Samples Received: 11/14/2018

Project Number:

Description: Soil Bin Samples

Report To: Cindy Bartlett
2201 NE 201st Avenue
Fairview, OR 97024-9718

Entire Report Reviewed By:



Brian Ford
Project Manager

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



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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



SB1A_111318 L1044392-01 Solid

			Collected by	Collected date/time	Received date/time
			Brian Webb	11/13/18 10:12	11/14/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1198395	1	11/19/18 14:16	11/19/18 14:33	KBC
Mercury by Method 7471A	WG1197830	1	11/16/18 11:30	11/19/18 10:10	ABL
Metals (ICP) by Method 6010B	WG1197284	1	11/15/18 15:52	11/16/18 17:27	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1197254	1	11/15/18 13:10	11/15/18 14:36	JHH

¹ Cp

² Tc

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⁸ Al

⁹ Sc

SB1B_111318 L1044392-02 Solid

			Collected by	Collected date/time	Received date/time
			Brian Webb	11/13/18 10:14	11/14/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1198395	1	11/19/18 14:16	11/19/18 14:33	KBC
Mercury by Method 7471A	WG1197830	1	11/16/18 11:30	11/19/18 10:13	ABL
Metals (ICP) by Method 6010B	WG1197284	1	11/15/18 15:52	11/16/18 17:35	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1197254	1	11/15/18 13:10	11/15/18 14:56	JHH

SB1C_111318 L1044392-03 Solid

			Collected by	Collected date/time	Received date/time
			Brian Webb	11/13/18 10:16	11/14/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1198395	1	11/19/18 14:16	11/19/18 14:33	KBC
Mercury by Method 7471A	WG1197830	1	11/16/18 11:30	11/19/18 10:15	ABL
Metals (ICP) by Method 6010B	WG1197284	1	11/15/18 15:52	11/16/18 17:38	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1197254	1	11/15/18 13:10	11/15/18 15:16	JHH

SB2A_111318 L1044392-04 Solid

			Collected by	Collected date/time	Received date/time
			Brian Webb	11/13/18 10:00	11/14/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1198395	1	11/19/18 14:16	11/19/18 14:33	KBC
Mercury by Method 7471A	WG1197830	1	11/16/18 11:30	11/19/18 10:23	ABL
Metals (ICP) by Method 6010B	WG1197284	1	11/15/18 15:52	11/16/18 16:38	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1197254	1	11/15/18 13:10	11/15/18 15:36	JHH

SB2B_111318 L1044392-05 Solid

			Collected by	Collected date/time	Received date/time
			Brian Webb	11/13/18 10:05	11/14/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1198395	1	11/19/18 14:16	11/19/18 14:33	KBC
Mercury by Method 7471A	WG1197830	1	11/16/18 11:30	11/19/18 10:25	ABL
Metals (ICP) by Method 6010B	WG1197284	1	11/15/18 15:52	11/16/18 17:41	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1197254	1	11/15/18 13:10	11/15/18 15:56	JHH

SB2C_111318 L1044392-06 Solid

			Collected by	Collected date/time	Received date/time
			Brian Webb	11/13/18 10:10	11/14/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1198395	1	11/19/18 14:16	11/19/18 14:33	KBC
Mercury by Method 7471A	WG1197830	1	11/16/18 11:30	11/19/18 10:28	ABL
Metals (ICP) by Method 6010B	WG1197284	1	11/15/18 15:52	11/16/18 17:43	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1197254	1	11/15/18 13:10	11/15/18 16:16	JHH

ACCOUNT:

Cascade Corporation- Fairview, OR

PROJECT:

SDG:

L1044392

DATE/TIME:

11/20/18 16:41

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

Brian Ford
Project Manager

¹ Cp

² Tc

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Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.6		1	11/19/2018 14:33	WG1198395

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0245	1	11/19/2018 10:10	WG1197830

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		1.22	1	11/16/2018 17:27	WG1197284
Barium	25.2		0.612	1	11/16/2018 17:27	WG1197284
Cadmium	ND		0.245	1	11/16/2018 17:27	WG1197284
Chromium	3.68		1.22	1	11/16/2018 17:27	WG1197284
Lead	2.48		0.612	1	11/16/2018 17:27	WG1197284
Selenium	ND		2.45	1	11/16/2018 17:27	WG1197284
Silver	ND		0.612	1	11/16/2018 17:27	WG1197284

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0306	1	11/15/2018 14:36	WG1197254
Acrylonitrile	ND		0.0153	1	11/15/2018 14:36	WG1197254
Benzene	ND		0.00122	1	11/15/2018 14:36	WG1197254
Bromobenzene	ND		0.0153	1	11/15/2018 14:36	WG1197254
Bromodichloromethane	ND		0.00306	1	11/15/2018 14:36	WG1197254
Bromoform	ND		0.0306	1	11/15/2018 14:36	WG1197254
Bromomethane	ND		0.0153	1	11/15/2018 14:36	WG1197254
n-Butylbenzene	ND		0.0153	1	11/15/2018 14:36	WG1197254
sec-Butylbenzene	ND		0.0153	1	11/15/2018 14:36	WG1197254
tert-Butylbenzene	ND		0.00612	1	11/15/2018 14:36	WG1197254
Carbon tetrachloride	ND		0.00612	1	11/15/2018 14:36	WG1197254
Chlorobenzene	ND		0.00306	1	11/15/2018 14:36	WG1197254
Chlorodibromomethane	ND		0.00306	1	11/15/2018 14:36	WG1197254
Chloroethane	ND		0.00612	1	11/15/2018 14:36	WG1197254
Chloroform	ND		0.00306	1	11/15/2018 14:36	WG1197254
Chloromethane	ND		0.0153	1	11/15/2018 14:36	WG1197254
2-Chlorotoluene	ND		0.00306	1	11/15/2018 14:36	WG1197254
4-Chlorotoluene	ND		0.00612	1	11/15/2018 14:36	WG1197254
1,2-Dibromo-3-Chloropropane	ND		0.0306	1	11/15/2018 14:36	WG1197254
1,2-Dibromoethane	ND		0.00306	1	11/15/2018 14:36	WG1197254
Dibromomethane	ND		0.00612	1	11/15/2018 14:36	WG1197254
1,2-Dichlorobenzene	ND		0.00612	1	11/15/2018 14:36	WG1197254
1,3-Dichlorobenzene	ND		0.00612	1	11/15/2018 14:36	WG1197254
1,4-Dichlorobenzene	ND		0.00612	1	11/15/2018 14:36	WG1197254
Dichlorodifluoromethane	ND		0.00306	1	11/15/2018 14:36	WG1197254
1,1-Dichloroethane	ND		0.00306	1	11/15/2018 14:36	WG1197254
1,2-Dichloroethane	ND		0.00306	1	11/15/2018 14:36	WG1197254
1,1-Dichloroethene	ND		0.00306	1	11/15/2018 14:36	WG1197254
cis-1,2-Dichloroethene	ND		0.00306	1	11/15/2018 14:36	WG1197254
trans-1,2-Dichloroethene	ND		0.00612	1	11/15/2018 14:36	WG1197254
1,2-Dichloropropane	ND		0.00612	1	11/15/2018 14:36	WG1197254
1,1-Dichloropropene	ND		0.00306	1	11/15/2018 14:36	WG1197254
1,3-Dichloropropane	ND		0.00612	1	11/15/2018 14:36	WG1197254

1 Cp

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00306	1	11/15/2018 14:36	WG1197254
trans-1,3-Dichloropropene	ND		0.00612	1	11/15/2018 14:36	WG1197254
2,2-Dichloropropane	ND		0.00306	1	11/15/2018 14:36	WG1197254
Di-isopropyl ether	ND		0.00122	1	11/15/2018 14:36	WG1197254
Ethylbenzene	ND		0.00306	1	11/15/2018 14:36	WG1197254
Hexachloro-1,3-butadiene	ND		0.0306	1	11/15/2018 14:36	WG1197254
Isopropylbenzene	ND		0.00306	1	11/15/2018 14:36	WG1197254
p-Isopropyltoluene	ND		0.00612	1	11/15/2018 14:36	WG1197254
2-Butanone (MEK)	ND		0.0306	1	11/15/2018 14:36	WG1197254
Methylene Chloride	ND		0.0306	1	11/15/2018 14:36	WG1197254
4-Methyl-2-pentanone (MIBK)	ND		0.0306	1	11/15/2018 14:36	WG1197254
Methyl tert-butyl ether	ND		0.00122	1	11/15/2018 14:36	WG1197254
Naphthalene	ND		0.0153	1	11/15/2018 14:36	WG1197254
n-Propylbenzene	ND		0.00612	1	11/15/2018 14:36	WG1197254
Styrene	ND		0.0153	1	11/15/2018 14:36	WG1197254
1,1,1,2-Tetrachloroethane	ND		0.00306	1	11/15/2018 14:36	WG1197254
1,1,2,2-Tetrachloroethane	ND		0.00306	1	11/15/2018 14:36	WG1197254
1,1,2-Trichlorotrifluoroethane	ND		0.00306	1	11/15/2018 14:36	WG1197254
Tetrachloroethene	ND		0.00306	1	11/15/2018 14:36	WG1197254
Toluene	ND		0.00612	1	11/15/2018 14:36	WG1197254
1,2,3-Trichlorobenzene	ND		0.00306	1	11/15/2018 14:36	WG1197254
1,2,4-Trichlorobenzene	ND		0.0153	1	11/15/2018 14:36	WG1197254
1,1,1-Trichloroethane	ND		0.00306	1	11/15/2018 14:36	WG1197254
1,1,2-Trichloroethane	ND		0.00306	1	11/15/2018 14:36	WG1197254
Trichloroethene	ND		0.00122	1	11/15/2018 14:36	WG1197254
Trichlorofluoromethane	ND		0.00306	1	11/15/2018 14:36	WG1197254
1,2,3-Trichloropropane	ND		0.0153	1	11/15/2018 14:36	WG1197254
1,2,4-Trimethylbenzene	ND		0.00612	1	11/15/2018 14:36	WG1197254
1,2,3-Trimethylbenzene	ND		0.00612	1	11/15/2018 14:36	WG1197254
1,3,5-Trimethylbenzene	ND		0.00612	1	11/15/2018 14:36	WG1197254
Vinyl chloride	ND		0.00306	1	11/15/2018 14:36	WG1197254
Xylenes, Total	ND		0.00796	1	11/15/2018 14:36	WG1197254
(S) Toluene-d8	116		75.0-131		11/15/2018 14:36	WG1197254
(S) Dibromofluoromethane	84.1		65.0-129		11/15/2018 14:36	WG1197254
(S) 4-Bromofluorobenzene	98.2		67.0-138		11/15/2018 14:36	WG1197254

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Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	75.4		1	11/19/2018 14:33	WG1198395

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0265	1	11/19/2018 10:13	WG1197830

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		1.33	1	11/16/2018 17:35	WG1197284
Barium	59.8		0.663	1	11/16/2018 17:35	WG1197284
Cadmium	ND		0.265	1	11/16/2018 17:35	WG1197284
Chromium	8.83		1.33	1	11/16/2018 17:35	WG1197284
Lead	5.41		0.663	1	11/16/2018 17:35	WG1197284
Selenium	ND		2.65	1	11/16/2018 17:35	WG1197284
Silver	ND		0.663	1	11/16/2018 17:35	WG1197284

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0332	1	11/15/2018 14:56	WG1197254
Acrylonitrile	ND		0.0166	1	11/15/2018 14:56	WG1197254
Benzene	ND		0.00133	1	11/15/2018 14:56	WG1197254
Bromobenzene	ND		0.0166	1	11/15/2018 14:56	WG1197254
Bromodichloromethane	ND		0.00332	1	11/15/2018 14:56	WG1197254
Bromoform	ND		0.0332	1	11/15/2018 14:56	WG1197254
Bromomethane	ND		0.0166	1	11/15/2018 14:56	WG1197254
n-Butylbenzene	ND		0.0166	1	11/15/2018 14:56	WG1197254
sec-Butylbenzene	ND		0.0166	1	11/15/2018 14:56	WG1197254
tert-Butylbenzene	ND		0.00663	1	11/15/2018 14:56	WG1197254
Carbon tetrachloride	ND		0.00663	1	11/15/2018 14:56	WG1197254
Chlorobenzene	ND		0.00332	1	11/15/2018 14:56	WG1197254
Chlorodibromomethane	ND		0.00332	1	11/15/2018 14:56	WG1197254
Chloroethane	ND		0.00663	1	11/15/2018 14:56	WG1197254
Chloroform	ND		0.00332	1	11/15/2018 14:56	WG1197254
Chloromethane	ND		0.0166	1	11/15/2018 14:56	WG1197254
2-Chlorotoluene	ND		0.00332	1	11/15/2018 14:56	WG1197254
4-Chlorotoluene	ND		0.00663	1	11/15/2018 14:56	WG1197254
1,2-Dibromo-3-Chloropropane	ND		0.0332	1	11/15/2018 14:56	WG1197254
1,2-Dibromoethane	ND		0.00332	1	11/15/2018 14:56	WG1197254
Dibromomethane	ND		0.00663	1	11/15/2018 14:56	WG1197254
1,2-Dichlorobenzene	ND		0.00663	1	11/15/2018 14:56	WG1197254
1,3-Dichlorobenzene	ND		0.00663	1	11/15/2018 14:56	WG1197254
1,4-Dichlorobenzene	ND		0.00663	1	11/15/2018 14:56	WG1197254
Dichlorodifluoromethane	ND		0.00332	1	11/15/2018 14:56	WG1197254
1,1-Dichloroethane	ND		0.00332	1	11/15/2018 14:56	WG1197254
1,2-Dichloroethane	ND		0.00332	1	11/15/2018 14:56	WG1197254
1,1-Dichloroethene	ND		0.00332	1	11/15/2018 14:56	WG1197254
cis-1,2-Dichloroethene	ND		0.00332	1	11/15/2018 14:56	WG1197254
trans-1,2-Dichloroethene	ND		0.00663	1	11/15/2018 14:56	WG1197254
1,2-Dichloropropane	ND		0.00663	1	11/15/2018 14:56	WG1197254
1,1-Dichloropropene	ND		0.00332	1	11/15/2018 14:56	WG1197254
1,3-Dichloropropane	ND		0.00663	1	11/15/2018 14:56	WG1197254

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 11/13/18 10:14

L1044392

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00332	1	11/15/2018 14:56	WG1197254
trans-1,3-Dichloropropene	ND		0.00663	1	11/15/2018 14:56	WG1197254
2,2-Dichloropropane	ND		0.00332	1	11/15/2018 14:56	WG1197254
Di-isopropyl ether	ND		0.00133	1	11/15/2018 14:56	WG1197254
Ethylbenzene	ND		0.00332	1	11/15/2018 14:56	WG1197254
Hexachloro-1,3-butadiene	ND		0.0332	1	11/15/2018 14:56	WG1197254
Isopropylbenzene	ND		0.00332	1	11/15/2018 14:56	WG1197254
p-Isopropyltoluene	ND		0.00663	1	11/15/2018 14:56	WG1197254
2-Butanone (MEK)	ND		0.0332	1	11/15/2018 14:56	WG1197254
Methylene Chloride	ND		0.0332	1	11/15/2018 14:56	WG1197254
4-Methyl-2-pentanone (MIBK)	ND		0.0332	1	11/15/2018 14:56	WG1197254
Methyl tert-butyl ether	ND		0.00133	1	11/15/2018 14:56	WG1197254
Naphthalene	ND		0.0166	1	11/15/2018 14:56	WG1197254
n-Propylbenzene	ND		0.00663	1	11/15/2018 14:56	WG1197254
Styrene	ND		0.0166	1	11/15/2018 14:56	WG1197254
1,1,1,2-Tetrachloroethane	ND		0.00332	1	11/15/2018 14:56	WG1197254
1,1,2,2-Tetrachloroethane	ND		0.00332	1	11/15/2018 14:56	WG1197254
1,1,2-Trichlorotrifluoroethane	ND		0.00332	1	11/15/2018 14:56	WG1197254
Tetrachloroethene	ND		0.00332	1	11/15/2018 14:56	WG1197254
Toluene	ND		0.00663	1	11/15/2018 14:56	WG1197254
1,2,3-Trichlorobenzene	ND		0.00332	1	11/15/2018 14:56	WG1197254
1,2,4-Trichlorobenzene	ND		0.0166	1	11/15/2018 14:56	WG1197254
1,1,1-Trichloroethane	ND		0.00332	1	11/15/2018 14:56	WG1197254
1,1,2-Trichloroethane	ND		0.00332	1	11/15/2018 14:56	WG1197254
Trichloroethene	ND		0.00133	1	11/15/2018 14:56	WG1197254
Trichlorofluoromethane	ND		0.00332	1	11/15/2018 14:56	WG1197254
1,2,3-Trichloropropane	ND		0.0166	1	11/15/2018 14:56	WG1197254
1,2,4-Trimethylbenzene	ND		0.00663	1	11/15/2018 14:56	WG1197254
1,2,3-Trimethylbenzene	ND		0.00663	1	11/15/2018 14:56	WG1197254
1,3,5-Trimethylbenzene	ND		0.00663	1	11/15/2018 14:56	WG1197254
Vinyl chloride	ND		0.00332	1	11/15/2018 14:56	WG1197254
Xylenes, Total	ND		0.00862	1	11/15/2018 14:56	WG1197254
(S) Toluene-d8	115		75.0-131		11/15/2018 14:56	WG1197254
(S) Dibromofluoromethane	86.4		65.0-129		11/15/2018 14:56	WG1197254
(S) 4-Bromofluorobenzene	99.3		67.0-138		11/15/2018 14:56	WG1197254

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	75.8		1	11/19/2018 14:33	WG1198395

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0264	1	11/19/2018 10:15	WG1197830

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	1.38		1.32	1	11/16/2018 17:38	WG1197284
Barium	69.4		0.660	1	11/16/2018 17:38	WG1197284
Cadmium	0.548		0.264	1	11/16/2018 17:38	WG1197284
Chromium	5.06		1.32	1	11/16/2018 17:38	WG1197284
Lead	6.36		0.660	1	11/16/2018 17:38	WG1197284
Selenium	ND		2.64	1	11/16/2018 17:38	WG1197284
Silver	ND		0.660	1	11/16/2018 17:38	WG1197284

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0330	1	11/15/2018 15:16	WG1197254
Acrylonitrile	ND		0.0165	1	11/15/2018 15:16	WG1197254
Benzene	ND		0.00132	1	11/15/2018 15:16	WG1197254
Bromobenzene	ND		0.0165	1	11/15/2018 15:16	WG1197254
Bromodichloromethane	ND		0.00330	1	11/15/2018 15:16	WG1197254
Bromoform	ND		0.0330	1	11/15/2018 15:16	WG1197254
Bromomethane	ND		0.0165	1	11/15/2018 15:16	WG1197254
n-Butylbenzene	ND		0.0165	1	11/15/2018 15:16	WG1197254
sec-Butylbenzene	ND		0.0165	1	11/15/2018 15:16	WG1197254
tert-Butylbenzene	ND		0.00660	1	11/15/2018 15:16	WG1197254
Carbon tetrachloride	ND		0.00660	1	11/15/2018 15:16	WG1197254
Chlorobenzene	ND		0.00330	1	11/15/2018 15:16	WG1197254
Chlorodibromomethane	ND		0.00330	1	11/15/2018 15:16	WG1197254
Chloroethane	ND		0.00660	1	11/15/2018 15:16	WG1197254
Chloroform	ND		0.00330	1	11/15/2018 15:16	WG1197254
Chloromethane	ND		0.0165	1	11/15/2018 15:16	WG1197254
2-Chlorotoluene	ND		0.00330	1	11/15/2018 15:16	WG1197254
4-Chlorotoluene	ND		0.00660	1	11/15/2018 15:16	WG1197254
1,2-Dibromo-3-Chloropropane	ND		0.0330	1	11/15/2018 15:16	WG1197254
1,2-Dibromoethane	ND		0.00330	1	11/15/2018 15:16	WG1197254
Dibromomethane	ND		0.00660	1	11/15/2018 15:16	WG1197254
1,2-Dichlorobenzene	ND		0.00660	1	11/15/2018 15:16	WG1197254
1,3-Dichlorobenzene	ND		0.00660	1	11/15/2018 15:16	WG1197254
1,4-Dichlorobenzene	ND		0.00660	1	11/15/2018 15:16	WG1197254
Dichlorodifluoromethane	ND		0.00330	1	11/15/2018 15:16	WG1197254
1,1-Dichloroethane	ND		0.00330	1	11/15/2018 15:16	WG1197254
1,2-Dichloroethane	ND		0.00330	1	11/15/2018 15:16	WG1197254
1,1-Dichloroethene	ND		0.00330	1	11/15/2018 15:16	WG1197254
cis-1,2-Dichloroethene	ND		0.00330	1	11/15/2018 15:16	WG1197254
trans-1,2-Dichloroethene	ND		0.00660	1	11/15/2018 15:16	WG1197254
1,2-Dichloropropane	ND		0.00660	1	11/15/2018 15:16	WG1197254
1,1-Dichloropropene	ND		0.00330	1	11/15/2018 15:16	WG1197254
1,3-Dichloropropane	ND		0.00660	1	11/15/2018 15:16	WG1197254

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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.00330	1	11/15/2018 15:16	WG1197254
trans-1,3-Dichloropropene	ND		0.00660	1	11/15/2018 15:16	WG1197254
2,2-Dichloropropane	ND		0.00330	1	11/15/2018 15:16	WG1197254
Di-isopropyl ether	ND		0.00132	1	11/15/2018 15:16	WG1197254
Ethylbenzene	ND		0.00330	1	11/15/2018 15:16	WG1197254
Hexachloro-1,3-butadiene	ND		0.0330	1	11/15/2018 15:16	WG1197254
Isopropylbenzene	ND		0.00330	1	11/15/2018 15:16	WG1197254
p-Isopropyltoluene	ND		0.00660	1	11/15/2018 15:16	WG1197254
2-Butanone (MEK)	ND		0.0330	1	11/15/2018 15:16	WG1197254
Methylene Chloride	ND		0.0330	1	11/15/2018 15:16	WG1197254
4-Methyl-2-pentanone (MIBK)	ND		0.0330	1	11/15/2018 15:16	WG1197254
Methyl tert-butyl ether	ND		0.00132	1	11/15/2018 15:16	WG1197254
Naphthalene	ND		0.0165	1	11/15/2018 15:16	WG1197254
n-Propylbenzene	ND		0.00660	1	11/15/2018 15:16	WG1197254
Styrene	ND		0.0165	1	11/15/2018 15:16	WG1197254
1,1,1,2-Tetrachloroethane	ND		0.00330	1	11/15/2018 15:16	WG1197254
1,1,2,2-Tetrachloroethane	ND		0.00330	1	11/15/2018 15:16	WG1197254
1,1,2-Trichlorotrifluoroethane	ND		0.00330	1	11/15/2018 15:16	WG1197254
Tetrachloroethene	ND		0.00330	1	11/15/2018 15:16	WG1197254
Toluene	ND		0.00660	1	11/15/2018 15:16	WG1197254
1,2,3-Trichlorobenzene	ND		0.00330	1	11/15/2018 15:16	WG1197254
1,2,4-Trichlorobenzene	ND		0.0165	1	11/15/2018 15:16	WG1197254
1,1,1-Trichloroethane	ND		0.00330	1	11/15/2018 15:16	WG1197254
1,1,2-Trichloroethane	ND		0.00330	1	11/15/2018 15:16	WG1197254
Trichloroethene	ND		0.00132	1	11/15/2018 15:16	WG1197254
Trichlorofluoromethane	ND		0.00330	1	11/15/2018 15:16	WG1197254
1,2,3-Trichloropropane	ND		0.0165	1	11/15/2018 15:16	WG1197254
1,2,4-Trimethylbenzene	ND		0.00660	1	11/15/2018 15:16	WG1197254
1,2,3-Trimethylbenzene	ND		0.00660	1	11/15/2018 15:16	WG1197254
1,3,5-Trimethylbenzene	ND		0.00660	1	11/15/2018 15:16	WG1197254
Vinyl chloride	ND		0.00330	1	11/15/2018 15:16	WG1197254
Xylenes, Total	ND		0.00857	1	11/15/2018 15:16	WG1197254
(S) Toluene-d8	111		75.0-131		11/15/2018 15:16	WG1197254
(S) Dibromofluoromethane	87.1		65.0-129		11/15/2018 15:16	WG1197254
(S) 4-Bromofluorobenzene	101		67.0-138		11/15/2018 15:16	WG1197254

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	12.7		1	11/19/2018 14:33	WG1198395

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.158	1	11/19/2018 10:23	WG1197830

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		7.90	1	11/16/2018 16:38	WG1197284
Barium	156		3.95	1	11/16/2018 16:38	WG1197284
Cadmium	ND		1.58	1	11/16/2018 16:38	WG1197284
Chromium	10.1		7.90	1	11/16/2018 16:38	WG1197284
Lead	22.5		3.95	1	11/16/2018 16:38	WG1197284
Selenium	ND		15.8	1	11/16/2018 16:38	WG1197284
Silver	ND		3.95	1	11/16/2018 16:38	WG1197284

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.197	1	11/15/2018 15:36	WG1197254
Acrylonitrile	ND		0.0987	1	11/15/2018 15:36	WG1197254
Benzene	ND		0.00790	1	11/15/2018 15:36	WG1197254
Bromobenzene	ND		0.0987	1	11/15/2018 15:36	WG1197254
Bromodichloromethane	ND		0.0197	1	11/15/2018 15:36	WG1197254
Bromoform	ND		0.197	1	11/15/2018 15:36	WG1197254
Bromomethane	ND		0.0987	1	11/15/2018 15:36	WG1197254
n-Butylbenzene	ND		0.0987	1	11/15/2018 15:36	WG1197254
sec-Butylbenzene	ND		0.0987	1	11/15/2018 15:36	WG1197254
tert-Butylbenzene	ND		0.0395	1	11/15/2018 15:36	WG1197254
Carbon tetrachloride	ND		0.0395	1	11/15/2018 15:36	WG1197254
Chlorobenzene	ND		0.0197	1	11/15/2018 15:36	WG1197254
Chlorodibromomethane	ND		0.0197	1	11/15/2018 15:36	WG1197254
Chloroethane	ND		0.0395	1	11/15/2018 15:36	WG1197254
Chloroform	ND		0.0197	1	11/15/2018 15:36	WG1197254
Chloromethane	ND		0.0987	1	11/15/2018 15:36	WG1197254
2-Chlorotoluene	ND		0.0197	1	11/15/2018 15:36	WG1197254
4-Chlorotoluene	ND		0.0395	1	11/15/2018 15:36	WG1197254
1,2-Dibromo-3-Chloropropane	ND		0.197	1	11/15/2018 15:36	WG1197254
1,2-Dibromoethane	ND		0.0197	1	11/15/2018 15:36	WG1197254
Dibromomethane	ND		0.0395	1	11/15/2018 15:36	WG1197254
1,2-Dichlorobenzene	ND		0.0395	1	11/15/2018 15:36	WG1197254
1,3-Dichlorobenzene	ND		0.0395	1	11/15/2018 15:36	WG1197254
1,4-Dichlorobenzene	ND		0.0395	1	11/15/2018 15:36	WG1197254
Dichlorodifluoromethane	ND		0.0197	1	11/15/2018 15:36	WG1197254
1,1-Dichloroethane	ND		0.0197	1	11/15/2018 15:36	WG1197254
1,2-Dichloroethane	ND		0.0197	1	11/15/2018 15:36	WG1197254
1,1-Dichloroethene	ND		0.0197	1	11/15/2018 15:36	WG1197254
cis-1,2-Dichloroethene	ND		0.0197	1	11/15/2018 15:36	WG1197254
trans-1,2-Dichloroethene	ND		0.0395	1	11/15/2018 15:36	WG1197254
1,2-Dichloropropane	ND		0.0395	1	11/15/2018 15:36	WG1197254
1,1-Dichloropropene	ND		0.0197	1	11/15/2018 15:36	WG1197254
1,3-Dichloropropane	ND		0.0395	1	11/15/2018 15:36	WG1197254

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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.0197	1	11/15/2018 15:36	WG1197254
trans-1,3-Dichloropropene	ND		0.0395	1	11/15/2018 15:36	WG1197254
2,2-Dichloropropane	ND		0.0197	1	11/15/2018 15:36	WG1197254
Di-isopropyl ether	ND		0.00790	1	11/15/2018 15:36	WG1197254
Ethylbenzene	ND		0.0197	1	11/15/2018 15:36	WG1197254
Hexachloro-1,3-butadiene	ND		0.197	1	11/15/2018 15:36	WG1197254
Isopropylbenzene	ND		0.0197	1	11/15/2018 15:36	WG1197254
p-Isopropyltoluene	ND		0.0395	1	11/15/2018 15:36	WG1197254
2-Butanone (MEK)	ND		0.197	1	11/15/2018 15:36	WG1197254
Methylene Chloride	ND		0.197	1	11/15/2018 15:36	WG1197254
4-Methyl-2-pentanone (MIBK)	ND		0.197	1	11/15/2018 15:36	WG1197254
Methyl tert-butyl ether	ND		0.00790	1	11/15/2018 15:36	WG1197254
Naphthalene	ND		0.0987	1	11/15/2018 15:36	WG1197254
n-Propylbenzene	ND		0.0395	1	11/15/2018 15:36	WG1197254
Styrene	ND		0.0987	1	11/15/2018 15:36	WG1197254
1,1,1,2-Tetrachloroethane	ND		0.0197	1	11/15/2018 15:36	WG1197254
1,1,2,2-Tetrachloroethane	ND		0.0197	1	11/15/2018 15:36	WG1197254
1,1,2-Trichlorotrifluoroethane	ND		0.0197	1	11/15/2018 15:36	WG1197254
Tetrachloroethene	ND		0.0197	1	11/15/2018 15:36	WG1197254
Toluene	ND		0.0395	1	11/15/2018 15:36	WG1197254
1,2,3-Trichlorobenzene	ND		0.0197	1	11/15/2018 15:36	WG1197254
1,2,4-Trichlorobenzene	ND		0.0987	1	11/15/2018 15:36	WG1197254
1,1,1-Trichloroethane	ND		0.0197	1	11/15/2018 15:36	WG1197254
1,1,2-Trichloroethane	ND		0.0197	1	11/15/2018 15:36	WG1197254
Trichloroethene	ND		0.00790	1	11/15/2018 15:36	WG1197254
Trichlorofluoromethane	ND		0.0197	1	11/15/2018 15:36	WG1197254
1,2,3-Trichloropropane	ND		0.0987	1	11/15/2018 15:36	WG1197254
1,2,4-Trimethylbenzene	ND		0.0395	1	11/15/2018 15:36	WG1197254
1,2,3-Trimethylbenzene	ND		0.0395	1	11/15/2018 15:36	WG1197254
1,3,5-Trimethylbenzene	ND		0.0395	1	11/15/2018 15:36	WG1197254
Vinyl chloride	ND		0.0197	1	11/15/2018 15:36	WG1197254
Xylenes, Total	ND		0.0513	1	11/15/2018 15:36	WG1197254
(S) Toluene-d8	114		75.0-131		11/15/2018 15:36	WG1197254
(S) Dibromofluoromethane	86.3		65.0-129		11/15/2018 15:36	WG1197254
(S) 4-Bromofluorobenzene	98.7		67.0-138		11/15/2018 15:36	WG1197254

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	12.5		1	11/19/2018 14:33	WG1198395

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.161	1	11/19/2018 10:25	WG1197830

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		8.03	1	11/16/2018 17:41	WG1197284
Barium	154		4.01	1	11/16/2018 17:41	WG1197284
Cadmium	ND		1.61	1	11/16/2018 17:41	WG1197284
Chromium	10.3		8.03	1	11/16/2018 17:41	WG1197284
Lead	22.6		4.01	1	11/16/2018 17:41	WG1197284
Selenium	ND		16.1	1	11/16/2018 17:41	WG1197284
Silver	ND		4.01	1	11/16/2018 17:41	WG1197284

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.201	1	11/15/2018 15:56	WG1197254
Acrylonitrile	ND		0.100	1	11/15/2018 15:56	WG1197254
Benzene	ND		0.00803	1	11/15/2018 15:56	WG1197254
Bromobenzene	ND		0.100	1	11/15/2018 15:56	WG1197254
Bromodichloromethane	ND		0.0201	1	11/15/2018 15:56	WG1197254
Bromoform	ND		0.201	1	11/15/2018 15:56	WG1197254
Bromomethane	ND		0.100	1	11/15/2018 15:56	WG1197254
n-Butylbenzene	ND		0.100	1	11/15/2018 15:56	WG1197254
sec-Butylbenzene	ND		0.100	1	11/15/2018 15:56	WG1197254
tert-Butylbenzene	ND		0.0401	1	11/15/2018 15:56	WG1197254
Carbon tetrachloride	ND		0.0401	1	11/15/2018 15:56	WG1197254
Chlorobenzene	ND		0.0201	1	11/15/2018 15:56	WG1197254
Chlorodibromomethane	ND		0.0201	1	11/15/2018 15:56	WG1197254
Chloroethane	ND		0.0401	1	11/15/2018 15:56	WG1197254
Chloroform	ND		0.0201	1	11/15/2018 15:56	WG1197254
Chloromethane	ND		0.100	1	11/15/2018 15:56	WG1197254
2-Chlorotoluene	ND		0.0201	1	11/15/2018 15:56	WG1197254
4-Chlorotoluene	ND		0.0401	1	11/15/2018 15:56	WG1197254
1,2-Dibromo-3-Chloropropane	ND		0.201	1	11/15/2018 15:56	WG1197254
1,2-Dibromoethane	ND		0.0201	1	11/15/2018 15:56	WG1197254
Dibromomethane	ND		0.0401	1	11/15/2018 15:56	WG1197254
1,2-Dichlorobenzene	ND		0.0401	1	11/15/2018 15:56	WG1197254
1,3-Dichlorobenzene	ND		0.0401	1	11/15/2018 15:56	WG1197254
1,4-Dichlorobenzene	ND		0.0401	1	11/15/2018 15:56	WG1197254
Dichlorodifluoromethane	ND		0.0201	1	11/15/2018 15:56	WG1197254
1,1-Dichloroethane	ND		0.0201	1	11/15/2018 15:56	WG1197254
1,2-Dichloroethane	ND		0.0201	1	11/15/2018 15:56	WG1197254
1,1-Dichloroethene	ND		0.0201	1	11/15/2018 15:56	WG1197254
cis-1,2-Dichloroethene	ND		0.0201	1	11/15/2018 15:56	WG1197254
trans-1,2-Dichloroethene	ND		0.0401	1	11/15/2018 15:56	WG1197254
1,2-Dichloropropane	ND		0.0401	1	11/15/2018 15:56	WG1197254
1,1-Dichloropropene	ND		0.0201	1	11/15/2018 15:56	WG1197254
1,3-Dichloropropane	ND		0.0401	1	11/15/2018 15:56	WG1197254

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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND		0.0201	1	11/15/2018 15:56	WG1197254
trans-1,3-Dichloropropene	ND		0.0401	1	11/15/2018 15:56	WG1197254
2,2-Dichloropropane	ND		0.0201	1	11/15/2018 15:56	WG1197254
Di-isopropyl ether	ND		0.00803	1	11/15/2018 15:56	WG1197254
Ethylbenzene	ND		0.0201	1	11/15/2018 15:56	WG1197254
Hexachloro-1,3-butadiene	ND		0.201	1	11/15/2018 15:56	WG1197254
Isopropylbenzene	ND		0.0201	1	11/15/2018 15:56	WG1197254
p-Isopropyltoluene	ND		0.0401	1	11/15/2018 15:56	WG1197254
2-Butanone (MEK)	ND		0.201	1	11/15/2018 15:56	WG1197254
Methylene Chloride	ND		0.201	1	11/15/2018 15:56	WG1197254
4-Methyl-2-pentanone (MIBK)	ND		0.201	1	11/15/2018 15:56	WG1197254
Methyl tert-butyl ether	ND		0.00803	1	11/15/2018 15:56	WG1197254
Naphthalene	ND		0.100	1	11/15/2018 15:56	WG1197254
n-Propylbenzene	ND		0.0401	1	11/15/2018 15:56	WG1197254
Styrene	ND		0.100	1	11/15/2018 15:56	WG1197254
1,1,1,2-Tetrachloroethane	ND		0.0201	1	11/15/2018 15:56	WG1197254
1,1,2,2-Tetrachloroethane	ND		0.0201	1	11/15/2018 15:56	WG1197254
1,1,2-Trichlorotrifluoroethane	ND		0.0201	1	11/15/2018 15:56	WG1197254
Tetrachloroethene	ND		0.0201	1	11/15/2018 15:56	WG1197254
Toluene	ND		0.0401	1	11/15/2018 15:56	WG1197254
1,2,3-Trichlorobenzene	ND		0.0201	1	11/15/2018 15:56	WG1197254
1,2,4-Trichlorobenzene	ND		0.100	1	11/15/2018 15:56	WG1197254
1,1,1-Trichloroethane	ND		0.0201	1	11/15/2018 15:56	WG1197254
1,1,2-Trichloroethane	ND		0.0201	1	11/15/2018 15:56	WG1197254
Trichloroethene	ND		0.00803	1	11/15/2018 15:56	WG1197254
Trichlorofluoromethane	ND		0.0201	1	11/15/2018 15:56	WG1197254
1,2,3-Trichloropropane	ND		0.100	1	11/15/2018 15:56	WG1197254
1,2,4-Trimethylbenzene	ND		0.0401	1	11/15/2018 15:56	WG1197254
1,2,3-Trimethylbenzene	ND		0.0401	1	11/15/2018 15:56	WG1197254
1,3,5-Trimethylbenzene	ND		0.0401	1	11/15/2018 15:56	WG1197254
Vinyl chloride	ND		0.0201	1	11/15/2018 15:56	WG1197254
Xylenes, Total	ND		0.0522	1	11/15/2018 15:56	WG1197254
(S) Toluene-d8	114		75.0-131		11/15/2018 15:56	WG1197254
(S) Dibromofluoromethane	86.3		65.0-129		11/15/2018 15:56	WG1197254
(S) 4-Bromofluorobenzene	120		67.0-138		11/15/2018 15:56	WG1197254

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	12.2		1	11/19/2018 14:33	WG1198395

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.164	1	11/19/2018 10:28	WG1197830

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	ND		8.19	1	11/16/2018 17:43	WG1197284
Barium	167		4.09	1	11/16/2018 17:43	WG1197284
Cadmium	ND		1.64	1	11/16/2018 17:43	WG1197284
Chromium	9.84		8.19	1	11/16/2018 17:43	WG1197284
Lead	23.0		4.09	1	11/16/2018 17:43	WG1197284
Selenium	ND		16.4	1	11/16/2018 17:43	WG1197284
Silver	ND		4.09	1	11/16/2018 17:43	WG1197284

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.205	1	11/15/2018 16:16	WG1197254
Acrylonitrile	ND		0.102	1	11/15/2018 16:16	WG1197254
Benzene	ND	J3	0.00819	1	11/15/2018 16:16	WG1197254
Bromobenzene	ND		0.102	1	11/15/2018 16:16	WG1197254
Bromodichloromethane	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
Bromoform	ND		0.205	1	11/15/2018 16:16	WG1197254
Bromomethane	ND	J3 J6	0.102	1	11/15/2018 16:16	WG1197254
n-Butylbenzene	ND	J3	0.102	1	11/15/2018 16:16	WG1197254
sec-Butylbenzene	ND	J3	0.102	1	11/15/2018 16:16	WG1197254
tert-Butylbenzene	ND	J3	0.0409	1	11/15/2018 16:16	WG1197254
Carbon tetrachloride	ND	J3	0.0409	1	11/15/2018 16:16	WG1197254
Chlorobenzene	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
Chlorodibromomethane	ND		0.0205	1	11/15/2018 16:16	WG1197254
Chloroethane	ND	J3 J6	0.0409	1	11/15/2018 16:16	WG1197254
Chloroform	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
Chloromethane	ND	J3	0.102	1	11/15/2018 16:16	WG1197254
2-Chlorotoluene	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
4-Chlorotoluene	ND	J3	0.0409	1	11/15/2018 16:16	WG1197254
1,2-Dibromo-3-Chloropropane	ND		0.205	1	11/15/2018 16:16	WG1197254
1,2-Dibromoethane	ND		0.0205	1	11/15/2018 16:16	WG1197254
Dibromomethane	ND		0.0409	1	11/15/2018 16:16	WG1197254
1,2-Dichlorobenzene	ND		0.0409	1	11/15/2018 16:16	WG1197254
1,3-Dichlorobenzene	ND	J3	0.0409	1	11/15/2018 16:16	WG1197254
1,4-Dichlorobenzene	ND		0.0409	1	11/15/2018 16:16	WG1197254
Dichlorodifluoromethane	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
1,1-Dichloroethane	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
1,2-Dichloroethane	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
1,1-Dichloroethene	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
cis-1,2-Dichloroethene	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
trans-1,2-Dichloroethene	ND	J3	0.0409	1	11/15/2018 16:16	WG1197254
1,2-Dichloropropane	ND	J3	0.0409	1	11/15/2018 16:16	WG1197254
1,1-Dichloropropene	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
1,3-Dichloropropane	ND		0.0409	1	11/15/2018 16:16	WG1197254

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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
trans-1,3-Dichloropropene	ND		0.0409	1	11/15/2018 16:16	WG1197254
2,2-Dichloropropane	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
Di-isopropyl ether	ND	J3	0.00819	1	11/15/2018 16:16	WG1197254
Ethylbenzene	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
Hexachloro-1,3-butadiene	ND	J3	0.205	1	11/15/2018 16:16	WG1197254
Isopropylbenzene	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
p-Isopropyltoluene	ND	J3	0.0409	1	11/15/2018 16:16	WG1197254
2-Butanone (MEK)	ND		0.205	1	11/15/2018 16:16	WG1197254
Methylene Chloride	ND	J3	0.205	1	11/15/2018 16:16	WG1197254
4-Methyl-2-pentanone (MIBK)	ND		0.205	1	11/15/2018 16:16	WG1197254
Methyl tert-butyl ether	ND		0.00819	1	11/15/2018 16:16	WG1197254
Naphthalene	ND		0.102	1	11/15/2018 16:16	WG1197254
n-Propylbenzene	ND	J3	0.0409	1	11/15/2018 16:16	WG1197254
Styrene	ND	J3	0.102	1	11/15/2018 16:16	WG1197254
1,1,1,2-Tetrachloroethane	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
1,1,2,2-Tetrachloroethane	ND		0.0205	1	11/15/2018 16:16	WG1197254
1,1,2-Trichlorotrifluoroethane	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
Tetrachloroethene	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
Toluene	ND	J3	0.0409	1	11/15/2018 16:16	WG1197254
1,2,3-Trichlorobenzene	ND		0.0205	1	11/15/2018 16:16	WG1197254
1,2,4-Trichlorobenzene	ND		0.102	1	11/15/2018 16:16	WG1197254
1,1,1-Trichloroethane	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
1,1,2-Trichloroethane	ND		0.0205	1	11/15/2018 16:16	WG1197254
Trichloroethene	ND	J3	0.00819	1	11/15/2018 16:16	WG1197254
Trichlorofluoromethane	ND	J3	0.0205	1	11/15/2018 16:16	WG1197254
1,2,3-Trichloropropane	ND		0.102	1	11/15/2018 16:16	WG1197254
1,2,4-Trimethylbenzene	ND	J3	0.0409	1	11/15/2018 16:16	WG1197254
1,2,3-Trimethylbenzene	ND	J3	0.0409	1	11/15/2018 16:16	WG1197254
1,3,5-Trimethylbenzene	ND	J3	0.0409	1	11/15/2018 16:16	WG1197254
Vinyl chloride	ND	J3 J6	0.0205	1	11/15/2018 16:16	WG1197254
Xylenes, Total	ND	J3	0.0532	1	11/15/2018 16:16	WG1197254
(S) Toluene-d8	114		75.0-131		11/15/2018 16:16	WG1197254
(S) Dibromofluoromethane	88.8		65.0-129		11/15/2018 16:16	WG1197254
(S) 4-Bromofluorobenzene	102		67.0-138		11/15/2018 16:16	WG1197254

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3361619-1 11/19/18 14:33

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

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

L1044392-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1044392-06 11/19/18 14:33 • (DUP) R3361619-3 11/19/18 14:33

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	12.2	12.4	1	1.74		10

Laboratory Control Sample (LCS)

(LCS) R3361619-2 11/19/18 14:33

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



Method Blank (MB)

(MB) R3361186-1 11/19/18 09:21

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

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

(LCS) R3361186-2 11/19/18 09:24 • (LCSD) R3361186-3 11/19/18 09:26

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Mercury	0.300	0.251	0.281	83.8	93.8	80.0-120			11.3	20

L1044449-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1044449-01 11/19/18 09:29 • (MS) R3361186-4 11/19/18 09:31 • (MSD) R3361186-5 11/19/18 09:34

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Mercury	0.300	0.0271	0.298	0.278	90.1	83.5	1	75.0-125			6.94	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



L1044392-01,02,03,04,05,06

Method Blank (MB)

(MB) R3360811-1 11/16/18 16:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.460	1.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.200
Chromium	U		0.140	1.00
Lead	U		0.190	0.500
Selenium	U		0.620	2.00
Silver	U		0.120	0.500

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) R3360811-2 11/16/18 16:33 • (LCSD) R3360811-3 11/16/18 16:35

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	101	102	101	102	80.0-120			1.35	20
Barium	100	106	107	106	107	80.0-120			1.04	20
Cadmium	100	101	102	101	102	80.0-120			1.13	20
Chromium	100	104	105	104	105	80.0-120			0.791	20
Lead	100	103	104	103	104	80.0-120			1.22	20
Selenium	100	100	101	100	101	80.0-120			0.993	20
Silver	20.0	18.9	19.2	94.6	96.2	80.0-120			1.68	20

L1044392-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1044392-04 11/16/18 16:38 • (MS) R3360811-6 11/16/18 16:46 • (MSD) R3360811-7 11/16/18 16:48

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	790	ND	784	771	99.3	97.6	1	75.0-125			1.64	20
Barium	790	156	971	959	103	102	1	75.0-125			1.22	20
Cadmium	790	ND	781	769	98.9	97.4	1	75.0-125			1.56	20
Chromium	790	10.1	813	797	102	99.6	1	75.0-125			1.99	20
Lead	790	22.5	827	818	102	101	1	75.0-125			1.12	20
Selenium	790	ND	778	767	98.5	97.1	1	75.0-125			1.41	20
Silver	158	ND	149	147	94.3	93.0	1	75.0-125			1.43	20

Method Blank (MB)

(MB) R3360447-3 11/15/18 10:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
Bromodichloromethane	U		0.000788	0.00250
Bromoform	U		0.00598	0.0250
Bromomethane	U		0.00370	0.0125
n-Butylbenzene	U		0.00384	0.0125
sec-Butylbenzene	U		0.00253	0.0125
tert-Butylbenzene	U		0.00155	0.00500
Carbon tetrachloride	U		0.00108	0.00500
Chlorobenzene	U		0.000573	0.00250
Chlorodibromomethane	U		0.000450	0.00250
Chloroethane	U		0.00108	0.00500
Chloroform	U		0.000415	0.00250
Chloromethane	U		0.00139	0.0125
2-Chlorotoluene	U		0.000920	0.00250
4-Chlorotoluene	U		0.00113	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00510	0.0250
1,2-Dibromoethane	U		0.000525	0.00250
Dibromomethane	U		0.00100	0.00500
1,2-Dichlorobenzene	U		0.00145	0.00500
1,3-Dichlorobenzene	U		0.00170	0.00500
1,4-Dichlorobenzene	U		0.00197	0.00500
Dichlorodifluoromethane	U		0.000818	0.00250
1,1-Dichloroethane	U		0.000575	0.00250
1,2-Dichloroethane	U		0.000475	0.00250
1,1-Dichloroethene	U		0.000500	0.00250
cis-1,2-Dichloroethene	U		0.000690	0.00250
trans-1,2-Dichloroethene	U		0.00143	0.00500
1,2-Dichloropropane	U		0.00127	0.00500
1,1-Dichloropropene	U		0.000700	0.00250
1,3-Dichloropropane	U		0.00175	0.00500
cis-1,3-Dichloropropene	U		0.000678	0.00250
trans-1,3-Dichloropropene	U		0.00153	0.00500
2,2-Dichloropropane	U		0.000793	0.00250
Di-isopropyl ether	U		0.000350	0.00100
Ethylbenzene	U		0.000530	0.00250
Hexachloro-1,3-butadiene	U		0.0127	0.0250
Isopropylbenzene	U		0.000863	0.00250

1

Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc



Method Blank (MB)

(MB) R3360447-3 11/15/18 10:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00233	0.00500
2-Butanone (MEK)	U		0.0125	0.0250
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.0100	0.0250
Methyl tert-butyl ether	U		0.000295	0.00100
Naphthalene	U		0.00312	0.0125
n-Propylbenzene	U		0.00118	0.00500
Styrene	U		0.00273	0.0125
1,1,1,2-Tetrachloroethane	U		0.000500	0.00250
1,1,2,2-Tetrachloroethane	U		0.000390	0.00250
Tetrachloroethene	U		0.000700	0.00250
Toluene	U		0.00125	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000675	0.00250
1,2,3-Trichlorobenzene	0.000800	U	0.000625	0.00250
1,2,4-Trichlorobenzene	U		0.00482	0.0125
1,1,1-Trichloroethane	U		0.000275	0.00250
1,1,2-Trichloroethane	U		0.000883	0.00250
Trichloroethene	U		0.000400	0.00100
Trichlorofluoromethane	U		0.000500	0.00250
1,2,3-Trichloropropane	U		0.00510	0.0125
1,2,3-Trimethylbenzene	U		0.00115	0.00500
1,2,4-Trimethylbenzene	U		0.00116	0.00500
1,3,5-Trimethylbenzene	U		0.00108	0.00500
Vinyl chloride	U		0.000683	0.00250
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	115			75.0-131
(S) Dibromofluoromethane	83.7			65.0-129
(S) 4-Bromofluorobenzene	105			67.0-138

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R3360447-1 11/15/18 09:29 • (LCSD) R3360447-2 11/15/18 09:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	0.615	0.557	98.4	89.2	10.0-160			9.87	31
Acrylonitrile	0.625	0.757	0.698	121	112	45.0-153			8.05	22
Benzene	0.125	0.120	0.119	95.8	95.5	70.0-123			0.269	20
Bromobenzene	0.125	0.120	0.116	95.8	92.6	73.0-121			3.40	20
Bromodichloromethane	0.125	0.129	0.129	103	103	73.0-121			0.127	20



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

(LCS) R3360447-1 11/15/18 09:29 • (LCSD) R3360447-2 11/15/18 09:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromoform	0.125	0.126	0.124	101	99.0	64.0-132			1.92	20
Bromomethane	0.125	0.117	0.126	93.6	101	56.0-147			7.53	20
n-Butylbenzene	0.125	0.124	0.120	98.9	95.8	68.0-135			3.26	20
sec-Butylbenzene	0.125	0.131	0.129	105	103	74.0-130			1.47	20
tert-Butylbenzene	0.125	0.130	0.125	104	100	75.0-127			3.49	20
Carbon tetrachloride	0.125	0.138	0.136	110	109	66.0-128			1.13	20
Chlorobenzene	0.125	0.129	0.131	103	105	76.0-128			1.47	20
Chlorodibromomethane	0.125	0.130	0.132	104	105	74.0-127			1.08	20
Chloroethane	0.125	0.139	0.141	111	113	61.0-134			1.99	20
Chloroform	0.125	0.124	0.122	98.9	97.9	72.0-123			1.00	20
Chloromethane	0.125	0.117	0.115	93.6	92.2	51.0-138			1.57	20
2-Chlorotoluene	0.125	0.123	0.121	98.3	96.8	75.0-124			1.50	20
4-Chlorotoluene	0.125	0.126	0.122	100	97.7	75.0-124			2.82	20
1,2-Dibromo-3-Chloropropane	0.125	0.101	0.0952	80.4	76.1	59.0-130			5.46	20
1,2-Dibromoethane	0.125	0.129	0.130	103	104	74.0-128			1.16	20
Dibromomethane	0.125	0.133	0.129	107	103	75.0-122			3.25	20
1,2-Dichlorobenzene	0.125	0.124	0.121	99.0	96.9	76.0-124			2.15	20
1,3-Dichlorobenzene	0.125	0.120	0.116	96.3	93.1	76.0-125			3.36	20
1,4-Dichlorobenzene	0.125	0.116	0.115	92.8	92.0	77.0-121			0.838	20
Dichlorodifluoromethane	0.125	0.105	0.105	84.1	84.2	43.0-156			0.107	20
1,1-Dichloroethane	0.125	0.127	0.124	102	99.6	70.0-127			2.05	20
1,2-Dichloroethane	0.125	0.121	0.117	96.9	93.6	65.0-131			3.46	20
1,1-Dichloroethene	0.125	0.131	0.131	105	105	65.0-131			0.373	20
cis-1,2-Dichloroethene	0.125	0.133	0.132	106	105	73.0-125			0.868	20
trans-1,2-Dichloroethene	0.125	0.134	0.135	107	108	71.0-125			0.507	20
1,2-Dichloropropane	0.125	0.129	0.129	103	103	74.0-125			0.0340	20
1,1-Dichloropropene	0.125	0.146	0.145	117	116	73.0-125			0.673	20
1,3-Dichloropropane	0.125	0.153	0.155	123	124	80.0-125			1.46	20
cis-1,3-Dichloropropene	0.125	0.137	0.139	110	111	76.0-127			1.60	20
trans-1,3-Dichloropropene	0.125	0.131	0.133	105	106	73.0-127			1.64	20
2,2-Dichloropropane	0.125	0.129	0.126	103	101	59.0-135			2.09	20
Di-isopropyl ether	0.125	0.119	0.117	95.5	93.8	60.0-136			1.76	20
Ethylbenzene	0.125	0.131	0.131	105	105	74.0-126			0.0511	20
Hexachloro-1,3-butadiene	0.125	0.107	0.106	85.8	84.9	57.0-150			1.11	20
Isopropylbenzene	0.125	0.117	0.115	93.8	91.7	72.0-127			2.21	20
p-Isopropyltoluene	0.125	0.127	0.124	101	99.0	72.0-133			2.32	20
2-Butanone (MEK)	0.625	0.685	0.643	110	103	30.0-160			6.24	24
Methylene Chloride	0.125	0.101	0.0982	81.1	78.6	68.0-123			3.11	20
4-Methyl-2-pentanone (MIBK)	0.625	0.674	0.667	108	107	56.0-143			1.04	20
Methyl tert-butyl ether	0.125	0.121	0.116	97.0	93.2	66.0-132			4.08	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



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

(LCS) R3360447-1 11/15/18 09:29 • (LCSD) R3360447-2 11/15/18 09:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Naphthalene	0.125	0.110	0.104	87.7	83.5	59.0-130			4.83	20
n-Propylbenzene	0.125	0.116	0.113	92.8	90.0	74.0-126			3.09	20
Styrene	0.125	0.133	0.131	107	105	72.0-127			1.94	20
1,1,1,2-Tetrachloroethane	0.125	0.126	0.126	101	101	74.0-129			0.399	20
1,1,2,2-Tetrachloroethane	0.125	0.132	0.127	106	101	68.0-128			4.23	20
Tetrachloroethene	0.125	0.118	0.120	94.2	95.9	70.0-136			1.85	20
Toluene	0.125	0.120	0.123	96.2	98.6	75.0-121			2.50	20
1,1,2-Trichlorotrifluoroethane	0.125	0.130	0.129	104	103	61.0-139			0.402	20
1,2,3-Trichlorobenzene	0.125	0.121	0.119	96.8	95.2	59.0-139			1.63	20
1,2,4-Trichlorobenzene	0.125	0.115	0.113	92.3	90.5	62.0-137			1.93	20
1,1,1-Trichloroethane	0.125	0.130	0.129	104	103	69.0-126			0.670	20
1,1,2-Trichloroethane	0.125	0.132	0.134	106	107	78.0-123			1.15	20
Trichloroethene	0.125	0.135	0.136	108	108	76.0-126			0.0480	20
Trichlorofluoromethane	0.125	0.119	0.120	95.1	95.7	61.0-142			0.567	20
1,2,3-Trichloropropane	0.125	0.121	0.116	97.1	92.7	67.0-129			4.70	20
1,2,3-Trimethylbenzene	0.125	0.132	0.128	105	102	74.0-124			2.92	20
1,2,4-Trimethylbenzene	0.125	0.124	0.120	99.5	96.3	70.0-126			3.29	20
1,3,5-Trimethylbenzene	0.125	0.121	0.118	96.8	94.1	73.0-127			2.88	20
Vinyl chloride	0.125	0.110	0.114	87.7	91.2	63.0-134			3.87	20
Xylenes, Total	0.375	0.379	0.382	101	102	72.0-127			0.788	20
(S) Toluene-d8				104	106	75.0-131				
(S) Dibromofluoromethane				94.1	92.9	65.0-129				
(S) 4-Bromofluorobenzene				97.8	98.0	67.0-138				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1044392-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1044392-06 11/15/18 16:16 • (MS) R3360447-4 11/15/18 19:31 • (MSD) R3360447-5 11/15/18 19:51

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acetone	5.12	ND	3.53	3.94	69.0	77.0	1	10.0-160			10.8	40
Acrylonitrile	5.12	ND	5.02	5.55	98.1	108	1	10.0-160			10.0	40
Benzene	1.02	ND	0.463	0.957	45.2	93.5	1	10.0-149		J3	69.5	37
Bromobenzene	1.02	ND	0.655	0.957	64.0	93.5	1	10.0-156			37.5	38
Bromodichloromethane	1.02	ND	0.623	1.02	60.9	99.9	1	10.0-143		J3	48.5	37
Bromoform	1.02	ND	0.766	0.889	74.8	86.9	1	10.0-146			14.9	36
Bromomethane	1.02	ND	0.0472	0.132	4.61	12.9	1	10.0-149	J6	J3	94.7	38
n-Butylbenzene	1.02	ND	0.533	1.02	52.1	99.2	1	10.0-160		J3	62.2	40
sec-Butylbenzene	1.02	ND	0.517	1.07	50.5	104	1	10.0-159		J3	69.4	39
tert-Butylbenzene	1.02	ND	0.513	1.03	50.2	101	1	10.0-156		J3	67.1	39

L1044392-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1044392-06 11/15/18 16:16 • (MS) R3360447-4 11/15/18 19:31 • (MSD) R3360447-5 11/15/18 19:51

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 %
Carbon tetrachloride	1.02	ND	0.373	1.04	36.4	102	1	10.0-145		J3	94.4	37
Chlorobenzene	1.02	ND	0.623	1.08	60.9	105	1	10.0-152		J3	53.5	39
Chlorodibromomethane	1.02	ND	0.764	1.01	74.6	98.7	1	10.0-146			27.7	37
Chloroethane	1.02	ND	0.0755	0.818	7.38	79.9	1	10.0-146	J6	J3	166	40
Chloroform	1.02	ND	0.538	1.02	52.6	99.6	1	10.0-146		J3	61.7	37
Chloromethane	1.02	ND	0.306	0.700	29.9	68.4	1	10.0-159		J3	78.2	37
2-Chlorotoluene	1.02	ND	0.542	0.978	53.0	95.6	1	10.0-159		J3	57.4	38
4-Chlorotoluene	1.02	ND	0.599	1.03	58.5	100	1	10.0-155		J3	52.7	39
1,2-Dibromo-3-Chloropropane	1.02	ND	0.663	0.617	64.8	60.3	1	10.0-151			7.21	39
1,2-Dibromoethane	1.02	ND	0.859	1.03	84.0	101	1	10.0-148			18.3	34
Dibromomethane	1.02	ND	0.743	0.990	72.6	96.7	1	10.0-147			28.5	35
1,2-Dichlorobenzene	1.02	ND	0.703	0.962	68.7	94.0	1	10.0-155			31.1	37
1,3-Dichlorobenzene	1.02	ND	0.621	0.960	60.6	93.9	1	10.0-153		J3	43.0	38
1,4-Dichlorobenzene	1.02	ND	0.633	0.920	61.9	90.0	1	10.0-151			37.0	38
Dichlorodifluoromethane	1.02	ND	0.282	0.825	27.6	80.6	1	10.0-160		J3	98.0	35
1,1-Dichloroethane	1.02	ND	0.492	1.03	48.1	101	1	10.0-147		J3	71.0	37
1,2-Dichloroethane	1.02	ND	0.689	0.983	67.3	96.1	1	10.0-148		J3	35.3	35
1,1-Dichloroethene	1.02	ND	0.358	0.961	35.0	93.9	1	10.0-155		J3	91.3	37
cis-1,2-Dichloroethene	1.02	ND	0.552	1.06	54.0	104	1	10.0-149		J3	63.1	37
trans-1,2-Dichloroethene	1.02	ND	0.409	0.965	40.0	94.3	1	10.0-150		J3	80.9	37
1,2-Dichloropropane	1.02	ND	0.583	1.06	57.0	104	1	10.0-148		J3	58.1	37
1,1-Dichloropropene	1.02	ND	0.431	1.13	42.1	110	1	10.0-153		J3	89.6	35
1,3-Dichloropropane	1.02	ND	1.04	1.32	101	129	1	10.0-154			24.0	35
cis-1,3-Dichloropropene	1.02	ND	0.750	1.12	73.2	110	1	10.0-151		J3	40.0	37
trans-1,3-Dichloropropene	1.02	ND	0.800	1.08	78.2	106	1	10.0-148			29.8	37
2,2-Dichloropropane	1.02	ND	0.369	0.904	36.1	88.4	1	10.0-138		J3	84.1	36
Di-isopropyl ether	1.02	ND	0.683	1.04	66.7	102	1	10.0-147		J3	41.6	36
Ethylbenzene	1.02	ND	0.535	1.09	52.3	107	1	10.0-160		J3	68.2	38
Hexachloro-1,3-butadiene	1.02	ND	0.484	0.884	47.3	86.4	1	10.0-160		J3	58.5	40
Isopropylbenzene	1.02	ND	0.449	0.937	43.9	91.5	1	10.0-155		J3	70.4	38
p-Isopropyltoluene	1.02	ND	0.511	1.01	49.9	99.0	1	10.0-160		J3	65.9	40
2-Butanone (MEK)	5.12	ND	4.17	4.80	81.4	93.9	1	10.0-160			14.3	40
Methylene Chloride	1.02	ND	0.481	0.806	47.0	78.7	1	10.0-141		J3	50.6	37
4-Methyl-2-pentanone (MIBK)	5.12	ND	5.47	5.41	107	106	1	10.0-160			0.994	35
Methyl tert-butyl ether	1.02	ND	0.712	0.878	69.6	85.8	1	11.0-147			20.9	35
Naphthalene	1.02	ND	0.815	0.804	79.6	78.5	1	10.0-160			1.38	36
n-Propylbenzene	1.02	ND	0.464	0.946	45.3	92.5	1	10.0-158		J3	68.4	38
Styrene	1.02	ND	0.663	1.09	64.8	107	1	10.0-160		J3	48.9	40
1,1,1,2-Tetrachloroethane	1.02	ND	0.586	0.943	57.3	92.1	1	10.0-149		J3	46.6	39

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



L1044392-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1044392-06 11/15/18 16:16 • (MS) R3360447-4 11/15/18 19:31 • (MSD) R3360447-5 11/15/18 19:51

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,2,2-Tetrachloroethane	1.02	ND	0.888	0.931	86.8	91.0	1	10.0-160			4.75	35
Tetrachloroethene	1.02	ND	0.375	0.906	36.6	88.6	1	10.0-156		J3	83.0	39
Toluene	1.02	ND	0.516	1.00	50.4	98.1	1	10.0-156		J3	64.2	38
1,1,2-Trichlorotrifluoroethane	1.02	ND	0.349	1.00	34.1	97.9	1	10.0-160		J3	96.6	36
1,2,3-Trichlorobenzene	1.02	ND	0.769	0.936	75.1	91.4	1	10.0-160			19.6	40
1,2,4-Trichlorobenzene	1.02	ND	0.701	0.913	68.5	89.2	1	10.0-160			26.3	40
1,1,1-Trichloroethane	1.02	ND	0.395	1.02	38.6	99.6	1	10.0-144		J3	88.3	35
1,1,2-Trichloroethane	1.02	ND	0.899	1.13	87.9	110	1	10.0-160			22.7	35
Trichloroethene	1.02	ND	0.462	1.05	45.2	102	1	10.0-156		J3	77.3	38
Trichlorofluoromethane	1.02	ND	0.324	0.926	31.6	90.4	1	10.0-160		J3	96.3	40
1,2,3-Trichloropropane	1.02	ND	0.874	0.902	85.4	88.2	1	10.0-156			3.13	35
1,2,3-Trimethylbenzene	1.02	ND	0.680	1.03	66.5	101	1	10.0-160		J3	41.3	36
1,2,4-Trimethylbenzene	1.02	ND	0.656	0.989	64.1	96.6	1	10.0-160		J3	40.5	36
1,3,5-Trimethylbenzene	1.02	ND	0.527	0.948	51.5	92.7	1	10.0-160		J3	57.1	38
Vinyl chloride	1.02	ND	0.0232	0.0399	2.27	3.90	1	10.0-160	J6	J3 J6	53.1	37
Xylenes, Total	3.07	ND	1.68	3.09	54.8	101	1	10.0-160		J3	59.1	38
(S) Toluene-d8					109	109		75.0-131				
(S) Dibromofluoromethane					89.4	90.3		65.0-129				
(S) 4-Bromofluorobenzene					100	98.1		67.0-138				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier Description

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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gi

8 Ai

9 Sc



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

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

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

State Accreditations

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

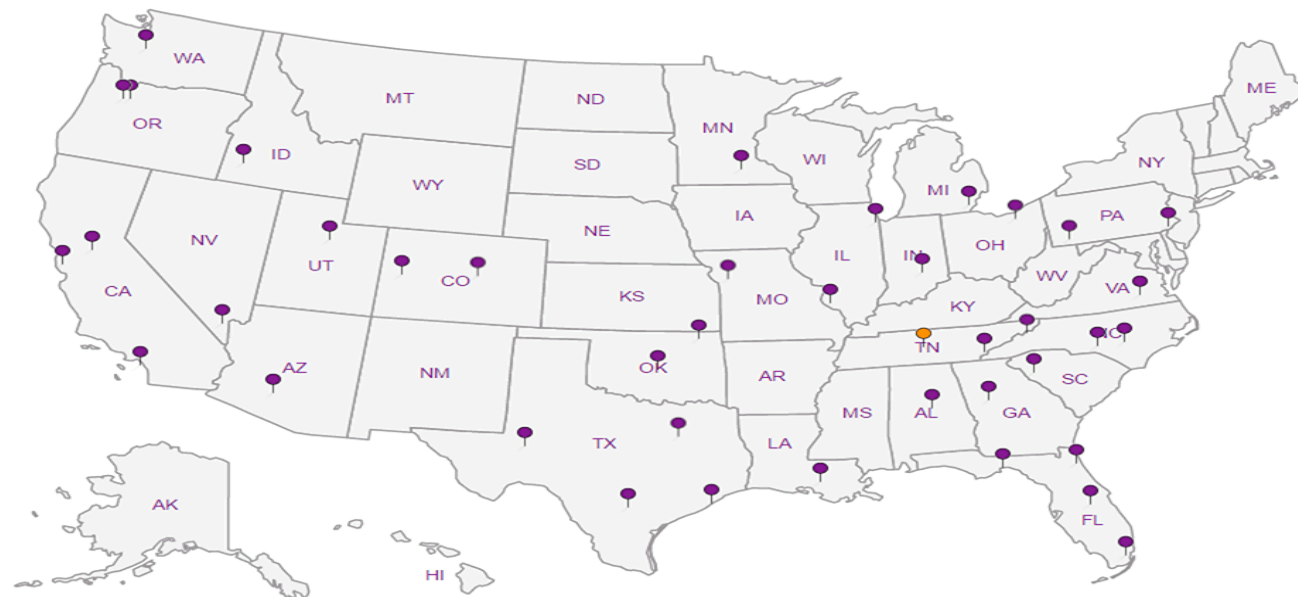
Third Party Federal Accreditations

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

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

Our Locations

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



Cascade Corporation- Fairview, OR 2201 NE 201st Avenue Fairview, OR 97024-9718 Report to: Cindy Bartlett						Billing Information:						Analysis / Container / Preservative						Chain of Custody Page ____ of ____	
						Accounts Payable P.O. Box 20187 Portland, OR 97294-0187												 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859	
Project Description: Soil Bin Samples						City/State Collected: Gresham, OR						MRCRA8 Metals 4ozClr-NoPres VOCs V8260 40mlAmb/MeOH5ml/Syr dry weight 2ozClr-NoPres						L# U044392	
Phone: 503-669-6286			Client Project #			Lab Project # CASCORFOR-PNG0564			B195										
Fax:			Site/Facility ID #			P.O. #			Acctnum: CASCORFOR										
Collected by (print): Brian Webb			Rush? (Lab MUST Be Notified) ☐ Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day			Quote #			Template: T142703										
Collected by (signature): 			Date Results Needed			No. of Cntrs			Prelogin: P680121										
Immediately Packed on Ice N ☒ Y ☒									TSR: 110 - Brian Ford										
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs											Shipped Via:		
SB1A-111318		SS		11/13/18	10:12	2 X	X										Remarks		
SB1B-111318		SS		11/13/18	10:14	2 X	X										Sample # (lab only)		
SB1C-111318		SS		11/13/18	10:16	2 X	X										-01		
SB2A-111318		SS		11/13/18	10:00	2 X	X										-02		
SB2B-111318		SS		11/13/18	10:05	2 X	X										-03		
SB2C-111318		SS		11/13/18	10:10	2 X	X										-01		
Temp blank						2											-02		
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other ☒						Remarks: Mix of water, gravel, and drill cuttings.						pH _____ Temp _____ Flow _____ Other _____							
Samples returned via: UPS FedEx Courier						Tracking # 4510 16575260						Sample Receipt Checklist COC Seal Present/Intact: ☒ NP ☒ Y ☒ N COC Signed/Accurate: ☒ Y ☒ N Bottles arrive intact: ☒ Y ☒ N Correct bottles used: ☒ Y ☒ N Sufficient volume sent: ☒ Y ☒ N If Applicable VOA Zero Headspace: ☒ Y ☒ N Preservation Correct/Checked: ☒ Y ☒ N							
Relinquished by: (Signature)			Date: 11/13/18		Time: 10:30		Received by: (Signature)			Trip Blank Received: Yes/ ☒ No HCL / MeOH TBR			If preservation required by Login: Date/Time						
Relinquished by: (Signature)			Date:		Time:		Received by: (Signature)			Temp: °C 10.4=0.6 RM 12 clor									
Relinquished by: (Signature)			Date:		Time:		Received for lab by: (Signature)			Date: 11/14/18 Time: 0945			Hold: Condition: NCF / ☒ OK						

Brian Ford

From: Cindy Bartlett <CBartlett@Geosyntec.com>
Sent: Thursday, November 15, 2018 9:46 AM
To: Brian Ford
Subject: RE: Pace Analytical National Login for Soil Bin Samples L1044392

Hi Brian,
Please also run these samples for VOCs. The field crew should have marked that box for the six samples as well.

Thank you,
Cindy

-----Original Message-----

From: Brian Ford <bford@pacenational.com>
Sent: Wednesday, November 14, 2018 4:49 PM
To: Cindy Bartlett <CBartlett@Geosyntec.com>
Subject: Pace Analytical National Login for Soil Bin Samples L1044392

Thank you for choosing Pace National! Please find enclosed PDF files containing your laboratory login confirmation and chain of custody.

Pace National is leading the laboratory industry with our On-line Data Management tools. Please contact your Project Manager to learn how to create historical Excel tables or access data in real time using powerful and intuitive software that is only available at https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fna01.safelinks.protection.outlook.com%2f%3furl%3dhttps%253A%252F%252Fwww.pacenational.com%26amp%3bdata%3d02%257C01%257CCBartlett%2540Geosyntec.com%257Cebedbb728fb441a546ce08d64a9410b1%257C7125495671b047f48977c4c17bc205cb%257C1%257C0%257C636778397646541889%26amp%3bsdata%3da9vEFh8EKPP15evkXj0bQ0y7fsZ6OtYLzfC248LrAmU%253D%26amp%3breserved%3d0.&c=E,1,zv39_fzoA0CgcQlIH92c9JWclyZLL32-2JLOQD339ymOerSJIzB9TFXh6na0zhq-1jR0-uXCcU_jD74OOh9zKTmI9oIVVgOo8kt1d56csMP5aGDLvVFidnw4As,&typo=1

Visit Pace National's secure data management web site - myData - for all your reporting and data management needs at https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fna01.safelinks.protection.outlook.com%2f%3furl%3dhttps%253A%252F%252Fwww.pacenational.com%252Flogin%26amp%3bdata%3d02%257C01%257CCBartlett%2540Geosyntec.com%257Cebedbb728fb441a546ce08d64a9410b1%257C7125495671b047f48977c4c17bc205cb%257C1%257C0%257C636778397646541889%26amp%3bsdata%3d2%252B9S59%252FHjUAmcficN7sVd9tvRDnnxeq1Ls1S6YyotKQ%253D%26amp%3breserved%3d0&c=E,1,G_X4SMNuJ7o1fGGf_ZwxnUyevmyl1uCpG1_D1vtmcXGwRWdKIB4xvy6gVdeas5mp0ZQExi7hFfwqwhkme7-YhclffXdMmCmdS77Sq46mRQpsA,&typo=1

Pace National ... "Your Lab of Choice"

Happy Holidays from Pace National.

Pace Analytical National Center for Testing & Innovation will be closed for the Holidays per the below (all times CST):

Thursday November 22nd

Monday December 24th at Noon -> Tuesday December 25th Monday December 31st at Noon -> Tuesday January 1st

Considering these dates, please refrain from shipping:

Any/All Samples on Wednesday 11/21, Monday 12/24, and Monday 12/31 to avoid a minimum 24-hour delay in processing your samples which may result in unavoidable non-conformance issues.

BOD analysis on Saturday 11/17, Thursday 12/20, and Thursday 12/27 as the 5-day BOD take off run falls on a holiday.

Brian Ford
Technical Service Representative
615-773-9772

Pace Analytical National
12065 Lebanon Rd.
Mt. Juliet, TN 37122

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